DOCUMENT RESUME

ED 366 760 CE 065 595

TITLE TRW Communications on the Job I-II. [Employee Manual and] Facilitator Manual.

INSTITUTION Cuyahoga Community Coll., Cleveland, Ohio.

SPONS AGENCY Office of Vocational and Adult Education (ED), Washington, DC. National Workplace Literacy Program.

PUB DATE 94

NOTE 654p.; For related documents, see CE 065 594-596.

PUB TYPE Guides - Classroom Use - Teaching Guides (For Teacher) (052) -- Guides - Classroom Use - Instructional Materials (For Learner) (051)

EDRS PRICE MF03/PC27 Plus Postage.

DESCRIPTORS Adult Basic Education; Adult Literacy; Behavioral Objectives; *Communication Skills; Curriculum Guides; Inplant Programs; Learning Activities; Listening Skills; Phonics; Pretests Posttests; *Reading Skills; Teaching Guides; *Vocabulary Development; *Word Study Skills; Writing Skills

IDENTIFIERS *Workplace Literacy

ABSTRACT

Employee and facilitator manuals are provided for two courses developed for a workplace literacy program: Communications on the Job I and II. Each 10-session course begins with a preassessment and ends with a postassessment. Components of each 2-hour session are objectives, informational materials, and problems or exercises. The facilitator copies include a session overview with time suggestions and the answer keys. Topics covered in the first course include the following: self-awareness and personal learning styles; successful learning strategies; vocabulary building system; phonics review--consonants; using the dictionary; vocabulary building; phonics review--vowels; process and types of reading; job-related vocabulary improvement; roots, prefixes, and suffixes; synonyms and antonyms; homophones and homographs; following instructions; drawing logical conclusions; active listening skills; how to deal with difficult communication situations; and role playing. Topics covered in the second course are as follows: process and types of reading; active and passive reading; skimming and scanning; technical vocabulary building system; homophones and homographs; previewing; job-related vocabulary improvement; prefixes and suffixes; synonyms and antonyms; identifying main ideas, topics, and details; following instructions; drawing logical conclusions; reading and writing: memos; active listening skills; and identifying codes and symbols on schematics and blueprints. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 366 760

TRW

Communications

on-the-job

© 1994, Cuyahoga Community College - UTC

This curriculum was developed with support from the U.S. Department if Education, National Workplace Literacy Program. Reproduction of this curriculum in part or total, with the customary credit to the source, is permitted.

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it
☐ Minor changes have been made to improve reproduction quality

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

CE 065 595

BEST COPY AVAILABLE

I

TRW COMMUNICATIONS ON THE JOB I

SESSION OVERVIEW

10 2-hour sessions

Session 1

Self-Awareness and Personal Learning Styles
Pre-Assessment

Session 2

Successful Learning Strategies
Vocabulary Building System

Session 3

Phonics Review - Consonants
Using the Dictionary
Vocabulary Building

Session 4

Phonics Review - Vowels
The Process and Types of Reading
Job-related Vocabulary Improvement

Session 5

Roots, Prefixes and Suffixes
Job-related Vocabulary Improvement

Session 6

Synonyms and Antonyms
Job-related Vocabulary Improvement

Session 7

Homophones and Homographs
Job-related Vocabulary Improvement

Session 8

Following Instructions, Drawing Logical Conclusions
Job-related Vocabulary Improvement

Session 9

Active Listening Skills
How to Deal with Difficult Communication Situations
Role-playing Exercise
Review

Session 10

Review
Post-Assessment

S:\WSHARE\GRANT\NEWCOM1\COM1MODS.TRW

COMMUNICATIONS ON THE JOB I
PRE - ASSESSMENT

1) Name the four Preferred Learning Style categories represented by these initials:

V

A

K

T

2) Name one of the three components of effective learning.

____

3) List below 4 skills that help people learn more effectively:

______________ ______________

______________ ______________

4) The dictionary is considered a " power tool ". True False

5) Phonics skills are an important part of adult reading. True False

6) Name two types of dictionaries that are useful everyday.

______________ ______________

7) Name 2 components of a dictionary page.

______________ ______________

8) How many consonants are in the English alphabet? ______________

9) The letters **w** and **y** are: (circle one answer)

consonants vowels both consonants and vowels

10) Circle the words with the short **e** sound:

she verse fret Pete

bench these press wed

11) A person's attitude is an important part of the reading process. True False

12) Name two of the four major components of Reading.

13) A person should always try to maintain the same reading speed no matter what they are reading. True False

14) Reading is learned only at an early age. True False

15) A person must read every word to be a "good" reader. True False

16) If you read very fast you should still try to remember everything you read. True False

17) Name three good reading habits.

18) One word can have several different meanings. True False

19) A homophone is a ______________________________

20) Asking a co-worker is an acceptable way to find out what a new technical word means? True False

21) Read the following:

Producing a quality product at a fair price is the goal of any manufacturing plant. Therefore, quality control must be an important aspect of TRW's process. Product quality can be controlled in two ways.

What is the main topic of this reading:

____

____

22) Define the following TRW terms:

Dresser ______________________________

____

Shear ______________________________

____

Collet ______________________________

____

SPC ______________________________

____

Process ______________________________

____

23) What is the proper spelling of the circled word on this sign.

---

24) If you wanted to make this go faster, which knob would you turn ? (circle one)

left center right

25) Is the verb in the sentence on the white ticket correct? Please write the correct verb on the line.

____

OBJECTIVES

SESSION 1

- Identify ways to overcome personal obstacles to learning
- Identify his or her personal learning style

COMMUNICATIONS ON THE JOB 1
SESSION 1

THE TRAIN

What does "The Train" tell you about the power of your mind?

Have you heard of any other examples of people deciding something contrary to "fact" with dramatic results?

To what extent do you feel you control your attitudes? What circumstances do you feel take control away from you, and what would it take to get it back?

SOME REASONS WHY WE ASSUME WE CAN'T LEARN

- **Past Conditioning** - We were told we couldn't learn. We thought we weren't good at a particular subject or subjects.

- **Stereotypes** - How often have we heard statements like the following. "He's a lathe operator, great mechanical ability, but his verbal skills aren't too good." "She's wonderful at communicating with others, but technically, I don't think she has it"? In many cases, these statements reflect stereotypes present in our society and our companies. It's easy to buy into them. They create self-fulfilling prophecies so we fit the stereotype.

- **Other People's Perceptions of Us** - Often, we're labelled, usually early in life. "He's the artist." "She's the smart one!" "He has the mechanical mind." If this happens, we get pigeon-holed. We also assume that we can only be good at what people tell us we're good at. Or we assume that we're poor at whatever people tell us we're poor at. We then might try to live up (or down) to what other people expect.

Other reasons why people assume they can't learn:

____

____

____

____

COMMUNICATIONS ON THE JOB 1
SESSION 1

SUCCESSFUL LEARNING EXPERIENCE

Describe a recent successful learning experience.

Why did you want to learn this skill or task?

COMMUNICATIONS ON THE JOB 1
SESSION 1

SOME MOTIVATING FACTORS

- **Money** - People will often learn new skills to gain a promotion or to get a new higher-paying job.
- **Comfort** - People are motivated to learn new skills if it will make their jobs easier.
- **Safety/Health** - If a skill is necessary to their safety or health, people usually view that skill as an important one to learn.
- **Status** - People will often learn new skills if they believe it will increase their status. This can be status with their supervisor, their co-workers, or family and friends.

What factors motivate me?

____

____

____

____

COMMUNICATIONS ON THE JOB 1
SESSION 1

PERSONAL LEARNING STYLES

- **Visual= Seeing** - Learns best through observation or studying graphs or charts. Do you learn well from demonstrations? Does looking at graphs, drawings, charts, or maps, help you to understand something? You may be a visual learner.

- **Auditory= Hearing** - These people learn best through listening. Do you get a lot from lectures? Do you like to listen to educational audiotapes at home or in your car? Chances are you are an auditory learner.

- **Kinesthetic= Moving the body** - Learns best through movement or while moving. Do you like to walk around or knit or tinker while listening to educational material? Do you feel you're pretty good at picking up new sports moves after one or two tries? It's a good guess that you're a kinesthetic learner.

- **Touch** - Learns best through touch or "hands-on" experience. Are you the type of person that wants to start operating a new piece of equipment quickly? Do you want to touch or feel objects to get a better sense of them? Then you are most likely a touch learner.

LEARNING METHODS

- **Print/Individual** - Learns best through reading and writing. Do you love to read? Do you learn a lot from manuals, magazines and books? You may be a print-oriented learner.

You might learn best on your own with a book.

- **Interactive/Group** - These people learn best by talking with other people. Do you learn a lot from small group discussions? Does bouncing ideas off people help? You may be an interactive learner.

COMMUNICATIONS ON THE JOB 1
SESSION 1

WHAT KIND OF LEARNER AM I?

Learning Style Inventory

Check below the techniques through which you think you learn best.

___ 1. motion pictures

___ 2. lecture, information-giving

___ 3. group discussions

___ 4. reading assignments

___ 5. role playing with you as a particip

___ 6. project construction

___ 7. television programs

___ 8. audiotapes

___ 9. participant in panel discussion

___10. written reports

___11. nonverbal/body movements

___12. drawing, painting, or sculpting

___13. slides

___14. records

___ 15.question-answer sessions

___ 16. independent reading

___ 17. physical motion activities

___ 18. model building

___ 19. graphs, tables, and charts

___ 20. recitation by others

___ 21. interviews

___ 22. writing

___ 23. participant in physical games

___ 24. touching objects

___ 25. photographs

WHAT KIND OF LEARNER AM I?

Learning Style Inventory

Interpretation

Circle the numbers you checked on the Learning Style Inventory. Find the row where the most numbers are circled and identify the learning style to the right of it. Most likely, that's your dominant learning style. It is possible to have 2 learning styles with the same or almost the same number of circles. In that case, you probably use both learning styles equally well.

NUMBERS	LEARNING STYLE
1, 7, 13, 19, 25	VISUAL
2, 8, 14, 20	AUDITORY
3, 9, 15, 21	INTERACTIVE/GROUP
4, 10, 16, 22	PRINT/INDIVIDUAL
5, 11, 17, 23	KINESTHETIC
6, 12, 18, 24	TOUCH

COMMUNICATIONS ON THE JOB 1
SESSION 1

LEARNING STYLES ACTIVITY

Tony works for the Excellent Products Company operating a drill press. Recently, his company automated all the drill presses in the plant. Tony, and all the other drill press operators, must now learn to operate the automatic controls. Tony has been running the drill press for 5 years. He feels that the automation will make him more productive and allow him to learn new skills. This attitude helps him feel sure that can learn to work with the automatic control system. The big question is how will he learn about the new presses?

Tony's supervisor, John, brings him a copy of the big, thick manual. This manual came with the new machinery.

"Everything you need to know is right in there," says John. "Read it."

Tony tries to read it. This manual is boring to him. What he does find useful are the drawings and charts. After a week of trying to read the manual, Tony decides to talk to John.

"I could look at this manual from now till retirement and never learn what to do. I need someone to show me how to use this thing!"

John said he understood and the next day, he worked with Tony. John patiently explained everything he knew about the machine to Tony. Tony kept wanting to push the buttons and check out the information for himself. Tony didn't admit it to John, but sometimes he felt lost by John's explanations.

When he had explained everything to Tony, John asked him to repeat the steps for certain operations. Tony couldn't do it successfully. "Walk me through it," he kept saying.

"I just did," insisted John.

"Well, if I could just try it one time, then I think will remember it better," said Tony.

"No," said John, "Until you learn what to do, we can't take a chance on damaging the new machinery."

John walked away rather exasperated. Tony felt very frustrated. "If I could just watch someone operating one of these babies, then I could pick it up," he thought.

LEARNING STYLES ACTIVITY (cont'd)

The next day, Tony decided to take another route to learning the automated controls. He talked to the other drill press operators. Tony found that Nancy, a younger operator, was skilled at operating automatic controls. She had vocational training on these presses.

Tony asked Nancy if he could watch her in action. "Sure," Nancy said.

That afternoon, Tony went over to Nancy's drill press. She first explained what she was going to do, then did it. Tony kept track of the buttons she pushed and in what order. "Can I try it?" he asked when she was done with the demonstration.

"Of course," said Nancy. "I'll cancel the program I just did and you can start from scratch."

"Thanks," said Tony. He approached the controls. He was amazed when he remembered practically the whole sequence of events. Nancy just had to prompt him a couple of times.

"See, nothing to it," said Nancy when he finished successfully.

"Yeah, nothing to it," said Tony. "Wonder why it seemed so hard yesterday?" he thought.

Every day for a week, Tony worked with Nancy. By then he had all the basic operations down. John came by and saw Tony operating the automatic controls with skill and ease. "Really dug into that manual, didn't you, Tony?" he said. "I was beginning to think you were a hopeless case. Good job."

What kind of learner is Tony? Is there more than one style you can identify for him?

What kind of learner do you think John is? What kinds of problems did this cause between John and Tony?

LEARNING EFFECTIVELY

To learn effectively, you must:

- **Believe in yourself.**

- **Be motivated.**

- **Be aware of your personal learning style and take advantage of it, whenever possible.**

OBJECTIVES

SESSION 2

- Demonstrate study skills techniques in various learning situations
- Identify and practice a vocabulary building system

COMMUNICATIONS ON THE JOB I
SESSION 2

FOUR STUDY SKILLS TO HELP YOU LEARN

- Organize
- Concentrate
- Take Notes
- Improve Your Memory

COMMUNICATIONS ON THE JOB I
SESSION 2

ORGANIZE

In order to be successful in this class (and others), it's important to:

- Set a goal

- Plan how to reach that goal

- Act upon your plans

PERSONAL COMMUNICATIONS GOALS

It's important to set personal goals for this course. Take a few minutes and write down a goal that you would like to accomplish in Communications on the Job I.

MY PERSONAL COMMUNICATIONS GOAL IS:

WHAT IS CONCENTRATION?

Concentration is thinking.

Consider the postage stamp. It secures success through its ability to stick to one thing until it gets there.

-- Josh Billings

WHAT BREAKS OUR CONCENTRATION?

- **OUTSIDE/EXTERNAL PROBLEMS**

  Some examples: poor chairs, lighting, noise

  OTHERS: ______________________________

- **INSIDE/INTERNAL PROBLEMS**

  Some examples: personal problems, daydreaming

  OTHERS: ______________________________

- **PHYSICAL FACTORS**

  Some examples: hunger, thirst, tiredness, illness

  OTHERS: ______________________________

- **MENTAL FACTORS**

  Some examples: boredom, negative attitude

  OTHERS: ______________________________

WAYS TO INCREASE CONCENTRATION

- Keep your goal in mind.

- Develop an interest in and a positive attitude about the material.

- Try to decrease internal and external problems beforehand.

- Think about successes you've had in the past. Know that you will succeed this time! Then, get to work.

CONCENTRATION HINT: You can will yourself to concentrate and then practice. Start by telling yourself to concentrate for just 5 minutes. Then you can gradually increase your concentration time. Soon, concentration will become a good habit.

NOTETAKING TIPS

Listen actively - Good listening skills are important for taking good notes.

- **Don't try to write down every word the instructor says** - Shorten words and use clue words. Write a your summary. The most valuable notes to you are the ones in your own words.

- **Be neat and organized** - After all, what good are a bunch of messy, sloppy words that you won't be able to understand later? On the other hand, don't get too hung up on neatness. A word crossed out here or there or an arrow or two is OK, as long as it's understandable.

- **Review your notes daily** - It's best to review them right after class. Just a quick 5-10 minute review will help you to retain the material longer.

MEMORY IMPROVEMENT

Three Types of Memory

- Seeing

- Hearing

- Moving\ touching

MY STRONGEST TYPE OF MEMORY IS:

____

____

____

____

____

____

GENERAL TIPS TO IMPROVE YOUR MEMORY

- It's much easier to remember information about what interest you.
- It's a lot easier to remember the important points made, rather than to try and remember all the details given.
- You need to give your full attention to something that you want to remember.
- If you understand something, you'll remember it a lot easier.
- You need to tell yourself that you want or need to remember something.
- Have a positive mental set -- see yourself as a person with a good memory.
- Connect things in your mind.
- You'll more easily remember new things about a topic if you already know something about that topic.
- Group things you have to remember in a logical fashion.
- The more you practice, the better your memory will be.

MEMORY SYSTEMS

- **Observe It! -** The more and better you observe or study something, the easier it will be to remember.

- **See It! -** Picturing something helps us to remember it better. Concrete items are easier to visualize than abstract ideas.

- **Connect It! -** It's easier to remember new information when you associate it with something you already know.

- **Replace It! -** Think of and picture a word or group of words that sound like or remind you of what you want to remember. This works well for difficult ideas.

- **Group It! -** Divide items into logical groups. It's much easier to remember three or four groups of four to six items each than one large group of twenty to twenty-five items.

VOCABULARY BUILDING SYSTEM

WHAT IS VOCABULARY

A person usually has four different vocabularies. You developed these at different times and in different ways. They can be different in size. When they are put together, they are your key to being able to handle the English language.

A person learns a different vocabulary as they grow. You can see that each type of vocabulary is built upon the ones before. They develop as we develop.

LISTEN AND HEAR

____

____

SPEAKING

____

____

READING

____

____

WRITING

____

____

HOW TO BUILD VOCABULARY

There are many ways to build your vocabulary. Have you heard about the many methods that are sold on radio and TV? Reader's Digest provides a monthly word building program for millions of readers. You can improve your vocabulary, but any system requires time and energy on your part. You can't put it under your pillow and soak it up at night.

VOCABULARY IMPROVEMENT IN THIS COURSE

An easy method to improve your word power will be used in this course. It will help by making sure that any new words that come up in class become easier for you. It will also build another area of your vocabulary that we haven't talked about. The words you use on the job. The subject of job-related vocabulary will be presented in the next session.

TRW VOCABULARY ASSEMBLY SYSTEM (VAS)

This vocabulary system will help you work on words that you do not know. Therefore you won't work on words on lists that are already a working part of your vocabulary. These words will come from many different sources. They may be words from class. Words you hear spoken. Words from the newspaper, or magazines may be in your reading vocabulary, but not in your speaking vocabulary. Using this system for words like these will build all of the areas of your vocabulary that we discussed above. It will help you "assemble" a powerful vocabulary that will serve you well in your future.

COMMUNICATIONS ON THE JOB I
SESSION 2

HOW TO USE THE VAS

There are two components in the assembly of your system:

PART NUMBER 1 - YOUR CARDS

FRONT SIDE

The words, that you decide upon, will be placed on an index card. The new or never used word will be on one side of the card. If you saw the word in print, chances are you already have the correct spelling. If you meet the new word by hearing someone speak it, you may need to work a little harder to find it's correct spelling. Keep a good supply of cards on hand. If a new word surfaces when a card is not handy, write it down on something and place it on your **VAS** card as soon as possible.

It will also help to put the dictionary pronunciation on the front of the card. Write it down exactly as you see it in the dictionary. After the " Using the Dictionary" section of the next session you will add this part to your cards.

BACK

The definition will be placed on the other side of the card. This definition will not appear by magic. You will need to look it up and decide what to write on your card. It is important to remember that these are your personal cards. If what you write down on the definition side is not pretty or perfect that's OK! It's for you. If you need help with writing a definition your instructor can help.

Now write a sentence that uses the word in context. The sentence that you heard or saw when you first met this word might start you on the right track. The sentence that you put on your card would be most helpful if it is your sentence. Make up one that makes sense to you and the way you will use the new word.

FRONT	BACK
kĭn′-ĭs-thĕt′-ĭk Kinesthetic	using the state of bodily position and movement Thinking while I Run helps use My kinesthetic learning style to remember information.

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB I
SESSION 2

SKILL PRACTICE Choose three words to put on your cards right now. Try some of the new words you may have seen for the first time in the Personal Learning Styles section of Session 1. Work through putting these three words on cards in class today. Then start your system this week outside class. **PLEASE BRING AT LEAST FIVE NEW CARDS TO CLASS NEXT WEEK.**

PART NUMBER 2 Next session

OBJECTIVES

SESSION 3

- Demostrate consonent phonics skills
- Demonstrate ability to locate specific information in a dictionary

COMMUNICATIONS ON THE JOB I
SESSION 3

PHONICS REVIEW

There are two kinds of letters in the English alphabet, **consonants** and **vowels**. Twenty-one of the letters in the alphabet are consonants:

b c d f g h j k l m n

p q r s t v w x y z

Five of the twenty-six letters of the English alphabet are **vowels**:

a e i o u

This phonics review will include consonant blends, silent consonants, single long vowels and single short vowels. Using phonics is necessary when you need to decode and pronounce unknown words.

THE KEY STEPS IN USING PHONICS TO DECODE AND PRONOUNCE WORDS ARE:

1. Look at the letters that make up the word very carefully.

2. Say the sounds that letters and pairs of letters stand for.

3. After you have said all the sounds of the letters, say them again while blending the sounds together so that the result is the sound of the new word.

COMMUNICATIONS ON THE JOB I
SESSION 3

CONSONANT BLENDS

Consonant blends are combinations of two or three consonants, each with a distinct sound, that go together--blend smoothly with the other(s). These consonant blends can be found in the beginning, in the middle, or at the end of a word. Each consonant in the blend keeps its own speech sound, and these sounds can be heard when you say the blend. When you say the following words, you will be able to hear the sound of each of the consonants in the underlined blend.

blue
grass
drag
plastic
waste
undress
send
last
tent

The consonant blends are easier to learn when they are put into groups. The following are some often-used groups of consonant blends. Say the words in each group and listen for the sounds of the consonant blends.

L blends all have l as the last letter of the blend.

bl cl fl gl pl sl

Examples:

black clap fly glass plate slice splash

Class Examples:

____

____

PRACTICE 1

Say each of the following words. Circle each l blend you hear.

1. place
2. clock
3. slope
4. flat
5. glue
6. flop
7. claw
8. split
9. plum
10. bleed

COMMUNICATIONS ON THE JOB I
SESSION 3

R blends all have **r** as the last letter of the blend.

br **cr** **dr** **fr** **gr** **pr** **tr**

Examples:

brown crab drag fry green prize train try subtract

Class Examples:

PRACTICE 2

Say each of the following words. Circle each **r** blend you hear.

1. training
2. unfriendly
3. press
4. bring
5. drum
6. frank
7. regrind
8. profile
9. dresser
10. crib

COMMUNICATIONS ON THE JOB I
SESSION 3

S blends all have **s** as the beginning of the blend.

sc sk sm sn sp st sw scr spr str

Sl and spl can be **l** blends or **s** blends. They have been put in the **l** blend group.

Examples:

scale skip smile snake spider still sweet scrub spring string

Class Examples:

PRACTICE 3

Say each of the following words. Circle each **s** blend you hear.

1. scrap
2. spindle
3. screw
4. screen
5. smart
6. swear
7. snap
8. standard
9. first
10. desk

Other often-used consonant blends are usually found at the ends of words.

nt **nk** **nd** **ld**

Examples:

hunt thank found cold

Class Examples:

PRACTICE 4

Say each of the following words. Circle each consonant blend you hear.

1. bunk
2. field
3. sent
4. blend
5. lint
6. hold
7. treatment
8. send
9. tank
10. weld

SKILL PRACTICE: CONSONANT BLENDS

Circle the consonant blends you hear in the words in each of the following groups. Some words have more than one consonant blend. Other words do not have any blends at all.

1.	grind	greet	gold
2.	trapper	tailor	trailer
3.	clearest	contest	cripple
4.	subject	swallow	splinter
5.	pretend	placement	passage
6.	chunk	grasp	blunt
7.	favor	flavor	fright
8.	slender	sorrow	strike
9.	brain	blame	bold
10.	improve	instant	insist

SILENT CONSONANTS

When two consonants are next to each other in a word, sometimes one of them is silent. You do not hear it at all when you say the word. The following are some examples of silent consonants. Say the words in the examples. You should not hear the underlined letters.

Two of the Same Consonant Letters

When two of the same consonant letters are next to each other, only one sound is heard.

egg oddest purring bill putt missed

Examples of Silent Consonants

Silent b	lamb
Silent c	black
Silent g/gh	sign
Silent h	ghost
Silent k	knife
Silent l	calf
Silent n	autumn
Silent p	psalm
Silent s	isle
Silent t	castle
Silent w	wrong

Class Examples:

SKILL PRACTICE: SILENT CONSONANTS

Say each of the following words. Cross out any consonant letters you do not hear.

1. listen
2. thumb
3. high
4. scale
5. talk
6. psychology
7. rhyme
8. wreck
9. assign
10. knight

USING THE DICTIONARY

1. **Keep a dictionary within easy reach**

2. **Practice alphabetical order**

Two ways that might help:

If the word begins with b, look toward the front
If the word begins with m, look toward the middle
If the word begins with s, look toward the back of the dictionary

Another method groups the letters of the alphabet into sections:

1. **A B C D E F G**
2. **H I J K**
3. **L M N O P**
4. **Q R S T U V**
5. **W X Y Z**

Now practice picturing these sections in your mind. The next time you need to look something up in the dictionary, the phone book,the glossary of a manual, or a street name on a map, try to picture these sections.

PRACTICE PUTTING WORDS IN ALPHABETICAL ORDER

Keep the alphabet and the techniques above in mind when alphabetizing words, names etc. Practice with putting words in order helps when finding a word quickly.

If words all begin with the same letter the **second** letter determines the alphabetical order.

Circle the letter on the "g" word list that determines how these words were ordered:

" G" List

galley

girl

girth

generation

gold

golden

gum

COMMUNICATIONS ON THE JOB I
SESSION 3

ACTIVITY 1

This activity will give some hints, techniques and practice with putting words or names in alphabetical order. Some people seem to have an easier time with this. It is a skill that can be reviewed and improved.

Alphabetize a set of TRW Employee Daily Production Reports.

HINT: Separate (and alphabetize) these names in groups then rearrange them in alphabetical order.

Example:

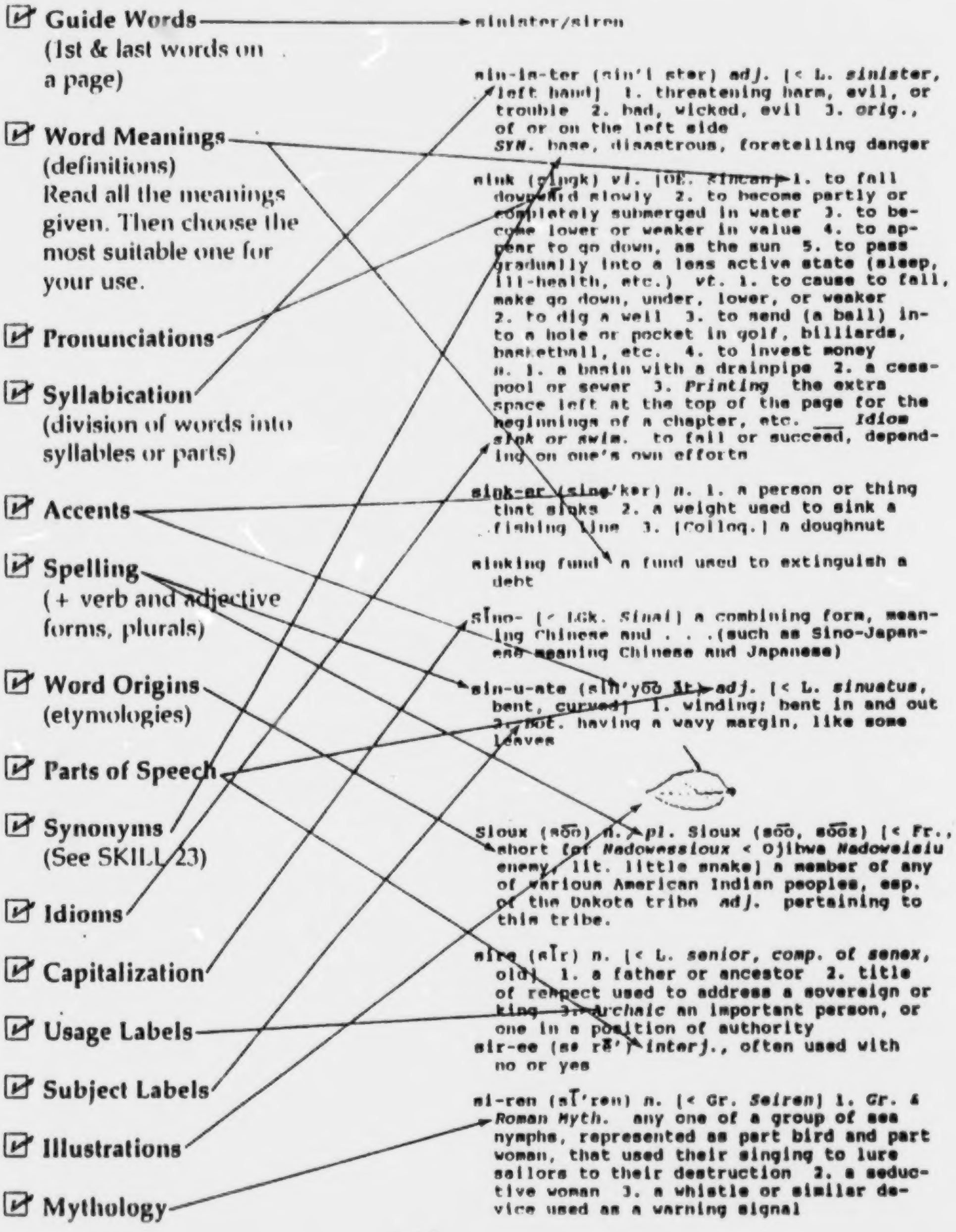
- Names beginning with " Robb"
- Names beginning with " Robert"
- Names beginning with " Robi"
- Names beginning with "Rod" and so on...

3. Use a dictionary with ease

SKILL 16: POWERHOUSE, POWER TOOL

The Dictionary

15 Ways a Dictionary Can *Energize* Your Reading



- ☑ **Guide Words** (1st & last words on a page)
- ☑ **Word Meanings** (definitions) Read all the meanings given. Then choose the most suitable one for your use.
- ☑ **Pronunciations**
- ☑ **Syllabication** (division of words into syllables or parts)
- ☑ **Accents**
- ☑ **Spelling** (+ verb and adjective forms, plurals)
- ☑ **Word Origins** (etymologies)
- ☑ **Parts of Speech**
- ☑ **Synonyms** (See SKILL 23)
- ☑ **Idioms**
- ☑ **Capitalization**
- ☑ **Usage Labels**
- ☑ **Subject Labels**
- ☑ **Illustrations**
- ☑ **Mythology**

sinister/siren

sin-is-ter (sin'i ster) *adj.* [< L. *sinister*, left hand] 1. threatening harm, evil, or trouble 2. bad, wicked, evil 3. *orig.*, of or on the left side
SYN. base, disastrous, foretelling danger

sink (siŋk) *vi.* [OE. *sincan*] 1. to fall downward slowly 2. to become partly or completely submerged in water 3. to become lower or weaker in value 4. to appear to go down, as the sun 5. to pass gradually into a less active state (sleep, ill-health, etc.) *vt.* 1. to cause to fall, make go down, under, lower, or weaker 2. to dig a well 3. to send (a ball) into a hole or pocket in golf, billiards, basketball, etc. 4. to invest money *n.* 1. a basin with a drainpipe 2. a cesspool or sewer 3. *Printing* the extra space left at the top of the page for the beginnings of a chapter, etc. ___ *Idiom* *sink or swim.* to fail or succeed, depending on one's own efforts

sink-er (siŋ'ker) *n.* 1. a person or thing that sinks 2. a weight used to sink a fishing line 3. [Colloq.] a doughnut

sinking fund a fund used to extinguish a debt

Sīno- [< LGk. *Sinai*] a combining form, meaning Chinese and . . .(such as Sino-Japanese meaning Chinese and Japanese)

sin-u-ate (sin'yoo āt) *adj.* [< L. *sinuatus*, bent, curved] 1. winding; bent in and out 2. *Bot.* having a wavy margin, like some leaves

Sioux (sōō) *n.*, *pl.* Sioux (sōō, sōōz) [< Fr., short for *Nadowessioux* < Ojibwa *Nadoweisiu* enemy, lit. little snake] a member of any of various American Indian peoples, esp. of the Dakota tribe *adj.* pertaining to this tribe.

sire (sīr) n. [< L. *senior, comp.* of *senex*, old] 1. a father or ancestor 2. title of respect used to address a sovereign or king 3. *Archaic* an important person, or one in a position of authority
sir-ee (se rē') *interj.*, often used with no or yes

si-ren (sī'ren) *n.* [< Gr. *Seiren*] 1. *Gr. & Roman Myth.* any one of a group of sea nymphs, represented as part bird and part woman, that used their singing to lure sailors to their destruction 2. a seductive woman 3. a whistle or similar device used as a warning signal

4. Choose the right dictionary for the task

Types of dictionaries

1) ______________________________

2) ______________________________

3) ______________________________

4) ______________________________

5) ______________________________

COMMUNICATIONS ON THE JOB I
SESSION 3

JOB RELATED VOCABULARY IMPROVEMENT

Building job related vocabulary starts with words that you already know. Words and terms used on the job may look like words you use outside of work everyday.

That's important to remember. Start by thinking of the definition that you have used outside of the job. Then think of the way you have either read or seen the word at work. This will also give you a clue to it's job related meaning.

Use your new and tuned up dictionary skills to build these words into your **VAS**. You probably have a "regular" dictionary on hand. Look the word up there. Review the definitions given. Separate the everyday uses from any that may be close to your job related use of this word. You need to be creative in finding the way the definitions fit. This dictionary may not reveal a definition that is job related. That will tell you that your word has a special technical meaning.

If the job related definitions of a technical words are not in this regular dictionary, you will need to find a new source for definitions. Let's take a look at some possibilities. Could you find a Technical Dictionary? Would a manual with a glossary help? What about asking a "seasoned" co-worker? Take a few moments to discuss these methods with the class. Rank them in the order that the class thinks would help find the most correct definition.

1. ______________________________

2. ______________________________

3. ______________________________

Discuss what is good and bad about each method:

____

____

____

OVERVIEW OF JOB VOCABULARY WORD SEARCH

Steps in review:

1. Think of "regular" use

2. Look up the "regular" definition

3. Find:
    a. job related dictionary
    b. manual with glossary
    c. co-worker with the definition

4. Place the word on a VAS card and build your job-related vocabulary!

CLASS ACTIVITY

Do Steps 1 & 2 and write down definitions for the following words. Use the space below.

Plant

step 1 ______________________________

step 2 ______________________________

Valve

step 1 ______________________________

step 2 ______________________________

Jam

step 1 ______________________________

step 2 ______________________________

Mean

step 1 ______________________________

step 2 ______________________________

Place these words on a **VAS** card. Now you will have job related vocabulary and others words in your sysrem. You will need to indicate on your cards that some of these words have their technical definitions. Perhaps the word **JOB** or **TECH** could appear in one corner of the card?

ASSIGNMENT You will continue on to do the step 3 as your assignment out side class. You may not need to do step 3 with these words. If not please explore how you will find help with this step when needed with future words.

OBJECTIVES

SESSION 4

- Demonstrate vowel phonics skills
- Identify components of the reading process

COMMUNICATIONS ON THE JOB I
SESSION 4

VOWELS

Five of the twenty-six letters of the English alphabet are vowels.

a e i o u

Sometimes the consonant letters **w** and **y** also act as vowels.

When the sound of a vowel is the same as its name, the vowel sound is said to be **long**. Say each of the following words and listen for the sound of the vowel's name. A bar (-) is used above a vowel letter to show that the letter stands for long vowel sound.

āce ēve īce ōh ūse

PRACTICE 1

Say each of the following words and listen for the name of the vowel letter. Then mark the long vowel that you hear.

base
Utah
tote
fuse
high

choke
Pete
hope
kite
flake

wipe
she
late
we
abuse

Others:

____

____

____

Single Vowels at the End of Short Words

A single vowel at the end of a short word usually stands for a long vowel sound. Say the following short words and listen for the long vowel sound in each.

be go hi

Others:

Silent *E* at the End of a Word

When a word has a vowel, consonant, silent **e** pattern, the vowel sometimes stands for a long sound. The following words are examples of this pattern. Notice that the final e is silent in each word and that the first vowel has a long sound.

tape these bite gage rude made

Others:

PRACTICE 2

Say the following words. You will not hear any long vowel sounds. Then add an e to each word. Now mark the long vowel sound you hear in each word.

fat

fat__

us

us__

Others:

Y AS A VOWEL

The letter **y** can act as either a consonant or vowel letter. The letter **y** found at the beginning of a word stands for the consonant sound in **yet**. When the letter **y** is found in the middle or at the end of a word, it stands for a vowel sound.

Short *I* Sound of *Y*

When the letter **y** is in the middle of a word, it usually stands for a short **i** sound. Listen for the short **i** sound. Listen for the short **i** sound of **y** in the following words.

gym hymn oxygen

Others:

Long *I* Sound of *Y*

As the last sound of a short word, the letter **y** usually stands for the long **i** sound heard in the following words.

dry fry my

Others:

Long *E* Sound of *Y*

When the letter **y** is the last letter in a word that has more than one part, it usually stands for a long **e** sound. Listen for the long **e** sound at the end of each of the following words.

rotary handy happy

Others:

SKILL PRACTICE: VOWELS

Say the following words and listen for the sound of each vowel. Write the letter that stands for the sound you hear and mark it as long or short.

1. fly ______
2. cute ______
3. me ______
4. floppy ______
5. valve ______
6. type ______
7. warm ______
8. pitch ______
9. place ______
10. lumpy ______
11. branch ______
12. vent ______
13. like ______
14. shaky ______
15. home ______
16. hike ______
17. turn ______
18. kit ______
19. settle ______
20. lunch ______

DOUBLE VOWELS--ONE VOWEL IS SILENT

When two vowels are next to each other in a word, they usually act as if they were only one vowel. Some double vowels stand for the sound of only one vowel--the other is silent. The following double vowels act as though they were single vowels. The first vowel stands for the sound you hear. The second vowel is silent.

Sounds of *AI* and *AY*

The double vowels **ai** and **ay** usually stand for only one sound, long **a**. The **i** and **y** are silent. Say the following words and listen for the sound of long **a**.

aid main laid

Others:

Sounds of *AI* and *AY*

The double vowels **ea** sometimes stands for a long **e** sound. The **a** is silent. Say the following words and listen for the long **e** sound.

clean sea

Others:

The double vowel **ea** may also stand for a short **e** sound. The **a** is still silent. Say the following words and listen for the short **e** sound.

bread death

Others:

Sound of *EE*

The double **ee** usually stands for the single long **e** sound. Say the following words and listen for the long **e** sound.

week peep

Others:

Sound of *OA*

The double vowel **oa** usually stands for the long **o** sound. The **a** is silent. Listen for the long **o** sound as you say the following words.

soap coal

Others:

DOUBLE VOWELS--NEW SINGLE SOUNDS

Some double vowels stand for a single sound that is different from that of either vowel when it stands alone.

Sounds of *AU* and *AW*

Both **au** and **aw** stand for the new single vowel sound you hear in the following words.

cause squaw

Others:

Note that the w acts as a vowel when it follows the **a** in these words.

Sounds of *OI* and *OY*

Double vowels **oi** and **oy** stand for the new single vowel sound you hear in the following words.

boy voice

Others:

Note that y acts as a vowel when it is part of the double vowel **oy**.

COMMUNICATIONS ON THE JOB I
SESSION 4

PRACTICE 3

Say each of the following words. If you can hear the sound of **aw** (shawl), write an **a** next to the word. If you hear the sound of **oy** (joy), write a **b** next to the word.

1. enjoy ______
2. rejoice ______
3. caught ______
4. lawn ______
5. coil ______
6. auto ______
7. crawl ______
8. noise ______
9. Paul ______
10. destroy ______

DOUBLE VOWELS THAT STAND FOR MORE THAN ONE SINGLE SOUND

Sounds of *OW*

The double vowel **ow** may stand for a long **o** sound. In this case, the **w** is silent. Say the following words and listen for a long **o** sound in each.

blow grow

Others:

____

Sometimes the **ow** may stand for the sound heard in the following words.

how owl

Others:

____

PRACTICE 4

Say each of the following words and listen for the two sounds of **ow**. If the word has an **ow** sound as in snow, write an **a** next to the word. If the word has the **ow** sound as in how, write a **b** next to the word.

1. power ______
2. brown ______
3. flow ______
4. growling ______
5. flower ______
6. now ______
7. town ______
8. show ______
9. prowl ______
10. slow ______

Sounds of *OU*

The double vowel **ou** usually stands for the same **ow** sound you hear in owl.

blouse out

Others:

The double vowel **ou** may also stand for three other sounds. In the following words, the double vowel **ou** stands for the long **o** sound. The **u** is silent. Listen for the long **o** sound in each word.

dough owl

Others:

The double vowel **ou** may also stand for a short **u** sound. Then the **o** is silent. Listen for the short **u** sound in the following words.

cousin

Others:

Finally, **ou** may stand for a long **u=oo** sound. In the following words, the **o** is again silent. Say the words and listen for the long **u** sound.

group

Others:

PRACTICE 5

Say the following words and listen for the sounds of **ou**. Write **a**, **b** or **c** to show which sound of **ou** you hear.

a = sound in out

b = sound in double (**u**)

c = sound in group (**u= oo**)

1. country ______
2. youth ______
3. count ______
4. house ______
5. enough ______
6. cougar ______
7. ounce ______
8. rough ______
9. trouble ______
10. coupon ______

Sounds of OO

The double **oo** may stand for two different sounds. One **oo** sound is heard in the following words. It is called the long **oo** sound (oo). Listen for the long **oo** sound as you say the following words.

room snoop

Others:

The other **oo** sound is heard in the following words. It is called the short **oo** sound (oo). Say the following words and listen for the short **oo** sound.

foot book

Others:

PRACTICE 6

Listen to the **oo** sound in each of the following words. Mark the **oo** sound as long (boot) or short (hood) in each word.

1. zoo
2. brook
3. shook
4. bloom
5. noose
6. hood
7. groom
8. wool
9. proof
10. rooster

USING PHONICS TO DECODE AND PRONOUNCE WORDS

You have learned sounds that letters of the English alphabet usually stand for. You are now ready to use these sounds to decode and pronounce words. This practice will help you learn to use phonics whenever you need to decode and pronounce words.

REMEMBER - THE KEY STEPS IN USING PHONICS TO DECODE AND PRONOUNCE WORDS ARE:

1. LOOK AT THE LETTERS THAT MAKE UP THE WORD VERY CAREFULLY. Use what you know about consonant blends and double vowels to help you spot letters that go together.

2. SAY THE SOUNDS THAT LETTERS AND PAIRS OF LETTERS STAND FOR. Be careful not to say silent letters.

3. AFTER YOU HAVE SAID ALL THE SOUNDS OF THE LETTERS, SAY THEM AGAIN WHILE BLENDING THE SOUNDS TOGETHER SO THAT THE RESULT IS THE SOUND OF THE NEW WORD. TRY THESE PSEUDO WORDS.

Word: **skoaph**	Word: **sproad**
sk = blend--go together	**spr** = blend--go together
oa = o	**oa** = double vowel = o
ph = f sound	**d** = consonant sound
sk + o + f	**spr + o + d**
Pronounced: **skof**	Pronounced: **sprod**

SKILL PRACTICE: USING PHONICS TO DECODE AND PRONOUNCE WORDS

Directions:Use what you know about letters and their sounds. Say each word. Then write its correct English spelling. These are real words.

Example: terckee = turkey; cou = cow.

1. psope __________
2. wramb __________
3. kwik __________
4. phite __________
5. shigh __________
6. cyk __________
7. phlag __________
8. cou __________
9. wrabit __________
10. doun __________

COMMUNICATIONS ON THE JOB I
SESSION 4

THE READING PROCESS

THE 4 COMPONENTS OF READING

Define:

Vocabulary ______________________________

____

Comprehension ______________________________

____

Speed ______________________________

____

Concentration ______________________________

____

ACTIVITY 1 Take an inventory of your reading skills !

67

ACTIVITY 1

READING SKILL INVENTORY

Consider the four areas of reading we have discussed:

VOCABULARY COMPREHENSION SPEED CONCENTRATION

Which is the area in which you have the most strength?

____

____

The most important area of my reading that I feel needs improving is:

____

____

The area of my reading that I would most like to improve is:

____

____

This course will give participants an overview of strategies to improve these skills especially on the job. Many different courses exist to focus on improving your reading skills. Write down a goal for improving your reading in the near future.

____

____

COMMUNICATIONS ON THE JOB I
SESSION 4

Reading Skills

Is reading important to your job?

____

____

____

A positive attitude

____

____

____

Personal goals

____

____

____

Different Reading Rates

Study speed

____

____

____

"Normal" speed

____

____

____

Skimming and Scanning

____

____

____

Stages of Reading

Learning to Read

Stage 1

____

____

____

Stage 2

____

____

____

Reading to Learn

Stage 3

____

____

____

"Good" Reading Habits

Concentration

Setting a Purpose

Setting a context

Fallacies about Reading

Become

Facts about Reading

Discuss responses and where these fallacies come from. Did the information in this session help turn these fallacies into facts?

Reading is learned only at an early age? True False

You should read all material in the same way? True False

A person has to read every word to be "GOOD" reader? True False

---

OBJECTIVES

SESSION 5

- Identify situations in which a technical dictionary is needed
- Differentiate between the meanings of common prefixes and suffixes
- Practice job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB I
SESSION 5

WORD STRUCTURE

Word parts defined:

prefixes ____

____

____

____

roots ____

____

____

____

suffixes ____

____

____

____

ROOTS

The parts of words that were just presented are important keys to discovering the meanings of words. The root is the only essential part of any word. If the other parts can be removed, they are most likely prefixes or suffixes. As was pointed out before, those word parts cannot stand alone. Because the English language is made up of root words from other languages, such as Greek and Latin, the root word that ends up standing alone may not actually make sense unless it's derivation is understood.

The easiest way to understand roots is to see them and review their meanings. The following roots and their meanings can provide participants with the keys to unlock the meanings of many words, even in more difficult and technical readings.

WORD PART	MEANING	EXAMPLE	YOUR EXAMPLE
audi	to hear	audio	______
auto	self	automobile	______
bio	life	biology	______
cide	to kill	pesticide	______
cred	to believe	credit	______
dic	to speak; tell; say	dictate	______
duc	lead; make; shape	reproduce	______
cap	take or seize; hold	capacity	______
(capt)		captive	______
fac	do, make	facsimile	______
fer	bear or carry	transfer	______
graph	write	paragraph	______
logos	speech or science	prologue	______

COMMUNICATIONS ON THE JOB I
SESSION 5

(ology)	study of	microbiology	________
luc	light; shine	translucent	________
		luminous	________
miss	send	dismiss	________
(mit)		remit	________
path	suffering; emotions	pathetic	________
phobia	fear	zoophobia	________
phono	sound	megaphone	________
port	carry	portable	________
scribe	write	scribble	________
(script)		Scripture	________
spec	look	spectator	________
vers	turn	conversion	________
vita	life	vitality	________
(viv)		vivify	________

77

c:\typeset\grant\com1trw\sess5trw.chp (TRW1) (2/93)

COMMUNICATIONS ON THE JOB I
SESSION 5

PREFIXES

This section will explore common prefixes.

Some prefixes have only one meaning while others may have multiple meanings.

Two prefixes that always mean **NOT**:

NON=NOT

Examples: ______________________________

____

____

UN=NOT

Examples:

____

____

Dictionaries do not define these words because the meanings are simply a sum of the prefix and the root word.

HANDOUT Prefixes in the Dictionary

COMMUNICATIONS ON THE JOB I
SESSION 5

Two prefixes that mean **NOT** but have more than one meaning:

DIS = NOT in these words:

Examples: ____

____

____

DIS = LACK OF/ OR OPPOSITE OF

Examples: ____

____

____

ACTIVITY 1

Look at the list of words. Think about what each word means. Circle each word in which **DIS** means **LACK OF OR OPPOSITE OF:**

1) discomfort
2) discourage
3) disadvantage
4) disarm
5) disobey
6) disagree
7) disassemble
8) disrobe
9) dismount
10) disorder

COMMUNICATIONS ON THE JOB I
SESSION 5

Other multiple meaning Prefixes:

1) IN = NOT

Examples: ____

____

2) IN = IN OR INTO

Examples: ____

____

3) IN = IM When it comes before b, m, and p. It has the same two meanings as in .

Examples: ____

____

4) IM = NOT

Examples: ____

____

5) IM = IN OR INTO

Examples: ____

____

6) MIS = WRONG OR WRONGLY / OR BAD OR BADLY

Examples: ____

____

Other Prefixes and their meanings:

7) RE = ANEW / AGAIN / BACK

Examples: ____

____

8) INTER = BETWEEN

Examples: ____

____

9) INTRA = WITHIN

Examples: ____

____

10) EX = OUT FROM, AWAY

Examples: ____

____

11) HYPER = OVER OR ABOVE NORMAL

Examples: ____

____

12) PRE = BEFORE

Examples: ____

____

OTHERS: ____

____

____

____

____

____

____

COMMUNICATIONS ON THE JOB I
SESSION 5

SUFFIX	MEANS	EXAMPLE
______________	without something	help ____________
		top ____________
______________	somewhat like something	fool ____________
		boy ____________
______________	full of	help ____________
		pour ____________
		smoke____________
______________	like a something	ghost ____________
		precise____________
______________	state of being something	employ____________
		revis ____________
		boy ____________

OBJECTIVES

SESSION 6

- Identify and select synonyms, antonyms, homophones and homographs
- Practice job-related Vocabulary Improvement
- Demonstrate skills for using a technical dictionary

COMMUNICATIONS ON THE JOB I
SESSION 6

SYNONYMS

Define: ____

____

What do synonyms do for our language ?

1) ____

2) ____

3) ____

Common synonyms:

____

____

modify=change
automobile=car
measure=gauge
cast=form
plant=factory
work=labor

Sources for finding synonyms:

1) ____

2) ____

PRACTICE: Use thesaurus to find other work related synonyms:

____

____

____

COMMUNICATIONS ON THE JOB I
SESSION 6

ANTONYMS

Define: ____

____

____

EXAMPLES:

____

____

____

Others:

succeed - fail

help - hinder

specific-general

erratic - regular

usable- scrap

revenue- expenses

PRACTICE: Use dictionaries to find antonyms.

____

____

____

COMMUNICATIONS ON THE JOB I
SESSION 6

MEMOS AND STANDARD OPERATING PROCEDURES

Written Communication on the Job

How many times have you heard someone at work say, "Could you write all that down?" or "Put that in writing for me, and I'll get it taken care of" ?

Writing is one way to make sure that plans get carried out right, that everyone understands a policy, that people follow safety rules, or that people know what their jobs are. In this session, you'll practice several kinds of writing that many people use on the job.

MEMOS

Define:

____

____

Why are memos important:

____

____

How does TRW use memos?

____

____

Are memos important in your job?

____

____

Memo Form

Memos are a simple form of writing that many people use on the job. You may not be required to use them yourself, but chances are that they pop up for you to read. If you were more confident in writing them well yourself, you may find a new way to get your good ideas across to others and be listened to.

A memo has some standard features that let the reader know important information about the memo.

Guidelines for Writing a Memo

1. Follow memo format, using these headings above the message:
   TO:
   From:
   Subject:
   Date:
2. Use your full name followed by your initials.
3. Use the full name of the person or specify the group of people the memo is directed to.
4. Make the specific subject of the memo clear in the heading.
5. Organize your thoughts carefully before writing your memo. Be sure to include only relevant information. Be sure you give your reader everything he or she needs to know.
6. State the purpose of theyou memo in the first sentence.
7. After you write your memo, check it carefully to be sure it is clear,

Trade Winds In Work Based Education, published by Partners In Education and Training, Baltimore, Maryland

COMMUNICATIONS ON THE JOB I
SESSION 6

Model Memo

MEMO

To: Don Parker
From: Mercedes Hunter
Subject: Lateness of February Bank Reconciliation
Date: March 14, 1986

This memo should explain why I am behind schedule in completing the February bank reconciliation.

The February statement form the first Mercantile Bank does not reconcile with our books. Apparently several errors were made when our deposits were recorded in our books. As a result, the bank statement shows a balance that is $3,532.31 less than the amount shown on our books.

I understand that the bank reconciliation is to be completed by the fifteenth of each month under normal circumstances. However, I will not be able to finish it until the errors have been corrected and the books for February brought up to date. I am certain that the reconciliation will be finished by March 20. Please see me if you have any questions.

Trade Winds In Work Based Education, published by Partners In Education and Training, Baltimore, Maryland

COMMUNICATIONS ON THE JOB I
SESSION 6

ACTIVITY: WRITING A MEMO FROM NOTES

USE GUIDELINES AND MODEL MEMO

USE YOUR OWN IDEA/SUGGESTION NOTES

SAMPLE NOTES:

Lee has some concern that the heating and cooling in the plant area is not always up to par. Lee has several ideas to help the situation. These are the notes that Lee wants to put into put these ideas in writing. Use Lee's notes to write a memo to submit to the Synchronous Steering Committee.

2-10-93 - to Synchronous Steering Committee

My Boss? anyone else? Keep a copy myself

problem

heat levels not consistent
hot and cold patches
takes days for the plant temp to catch up to outside conditions
hot outside- heat inside still on
cold outside- cool ventilation still onsolution/idea

solution/idea

review ventilation diagrams by TRW (Maint?)
check air flow with these new Flowmeter machines
new ducts off main duct in identified areas

My new idea

use heat from forging area as I have shown on the sketch
add sketch

COMMUNICATIONS ON THE JOB I
SESSION 6

Job- Related Vocabulary Improvement

A portion of each of the remaining sessions will be used to improve your work related vocabulary. Most of these words you know, but how many have you ever "looked up"?

In these sessions you will have a chance to find the definitions of these words in several different ways. It may take some searching on your part to find the "TRW definitions". You may come across words from another department that you hear but can't define. Even though you don't work with these words everyday, it will help to learn their "real" definitions.

Don't forget to place these technical words on **VAS** cards!!

OBJECTIVES

SESSION 7

- Identify and select homophones and homographs
- Practice job-related Vocabulary Improvement

SOP FOR ACMES

1. Stop the machines whenever defects occur...don't continue to make bad parts or defects.

2. Make sure center drill is sharp...if not change it.

3. Make sure face tool is sharp... if not sharpen or replace.

4. Take air hose and blow excess oil and grit out of center hole.

5. Check valve under 3 power magnifying glass to determine if valve is good or bad.

6. Record and track total number of parts run and total number of defects by FR by shift.

7. Repair any center hole defects on drill press.

8. Check OD R/O at least 2 times per shift and make needed changes...Don't add cost to valve.

9. This means if the center is too large or deep then scrap the valve. If not sure - check with supervisor.

STANDARD OPERATING PROCEDURE

DEPT 408-4

CORRECTIVE ACTION FOR WAUKESHA ENGINE AND GENERAL ELECTRIC.

SEGREGATION OF PARTS WITH OUT OF PRINT SEAT RUNOUT

PURPOSE: TO ELIMINATE THE POSSIBILITY OF PARTS WITH OUT OF PRINT SEAT RUNOUT FROM BEING PASSED ON TO VISUAL INSPECTION.

S.O.P.

SEAT OPERATORS TO CHECK SEAT RUNOUT 100% DURING OPERATION. PARTS ARE NOT TO EXCEED .0002 BELOW HIGH LIMIT ON BLUE PRINT UNLESS INSTRUCTED BY SUPERVISOR.

ANY PARTS EXCEEDING THIS TOLERANCE ARE TO BE GIVEN TO REPAIRMAN.

ALL PARTS RETURNED FROM REPAIR ARE TO BE GAGED TO VERIFY THAT SEAT RUNOUT IS NOW IN TOLERANCE.

AFTER VERIFICATION THE SEAT OPERATOR WILL SEND REPAIRED PARTS ON TO THE NEXT OPERATION.

AUGUST 8, 1991
TONY LEONARDI

S.O.P.

C.N.C. SET UP

1. REMOVE ALL VALVES AND SCRAP FROM PREVIOUS F.R.
2. GET SET UP CARD FROM SUPERVISOR
3. GET TAPES AND PRINTS FROM CRIB
4. GET PROPER GAGES SET
5. GET NECESSARY TOOLING AND MAKE CHANGES
6. RUN PROGRAM TAPE INTO COMPUTER
7. QUALIFY TOOL HOLDERS AS NEEDED
8. RUN VALVE AND GET READING FROM CRIB
9. MAKE NEEDED ADJUSTMENTS
10. TAKE ACID TEST ON STELLITE VALVES ONLY AND ADJUST
11. GET FINAL READING FROM CRIB
12. GET SUPERVISOR APPROVAL

** NOTE ** CHECK RUN OUT AT LEAST 4 TIMES DAILY
CHECK STELLITE LINE 2 TIMES DAILY

S.O.P.

ALL VALVES

IN TRAYS

SHOULD BE MARKED
(MAGIC MARKER)

ON THE STEM

PRIOR TO

FINISH GRINDING

CORRECTIVE ACTION FOR WAUKESHA ENGINE

QA678.679 11/1/91

CHARLIE

S.O.P.

CINCI STEM GRINDERS
ROUGH, SEMI. FINISH.

1. CLEAR OUT ANY F.R.'S BEFORE BEGINNING SET UP
2. DISCARD ANY SCRAP VALVES PROPERLY
3. OBTAIN SET UP CARD FROM SUPERVISOR
4. OBTAIN SKETCH FROM CRIB AND HAVE GAUGES SET IN GAUGE CRIB
5. DRESS TRACTOR WHEEL AND GRINDING WHEEL, THEN CHANGE BLADES
6. SET TRACTOR WHEEL TO BLADE, LEAVING 1/8" CLEARANCE BETWEEN TRACTOR WHEEL AND BLADE.
7. SET TRACTOR WHEEL SLIDE TO GRINDING WHEEL BY PUTTING A VALVE ON THE BLADE AND MOVING TRACTER WHEEL SLIDE.
8. SET KICKER ROD FOR PROPER GRIND LENGTH AND BLEND
9. GRIND VALVE
10. MAKE NECESSARY CHANGES
11. GET SUPERVISOR APPROVAL
12. CHECK STEM RUN OUT AT LEAST THREE (3) TIMES AN HOUR
13. (FINISH GRIND ONLY) CHECK STEM MICRO ON PROFILOMETER AFTER EVERY DRESS.
14. CHART FIVE (5) PARTS AN HOUR ON SPC CHARTS

S.O.P.

30/A LANDIS

1. REMOVE ALL PREVIOUS VALVES FROM AROUND MACHINE, DISCARD ALL SCRAP VALVES.
2. OBTAIN SET UP CARD FROM SUPERVISOR
3. OBTAIN PRINT AND MASTER VALVE FROM CRIBS.
4. SET UP NECESSARY GAUGES.
5. REMOVE COLLETS AND REPLACE WITH PROPER SIZE COLLET.
6. MOVE WORK HEAD TABLE TO PROPER ANGLE.
7. REPLACE OR ADJUST TIP STOP TO PROPER LENGTH.
8. REMOVE SEAT RUNOUT.
9. GRIND VALVE AND FIND SIZE.
10. CHECK PART ON ALL GAUGES AND MAKE NECESSARY ADJUSTMENTS.
11. USING PROPER BLUEING CONE, BLUE UP A PART (IF IT DOES NOT BLUE UP, MOVE SEAT ANGLE UNTIL PART BLUES UP.
12. GET READING FROM GAUGE CRIB.
13. OBTAIN SUPERVISOR APPROVAL.
14. CHECK ALL PARTS 100% ON ALL GAUGES.
15. CHECK SEAT MICRO TWO (2) TIMES AN HOUR.
16. RECORD ON SPC CHARTS ALL PERTINENT INFORMATION, (FIVE (5) PARTS AN HOUR.

12-1/2 LANDIS - STANDARD SETUP PROCEDURE

1. Clean machine of previous F.R.

2. Obtain setup card from supervisor.

Remove blade.

A. Unlock regulating wheel handwheel locking screw.

B. Retract regulating wheel by turning handwheel counter clockwise to assure proper working space for blade removal.

C. Loosen kicker rod and retract rod for blade clearance.

D. Loosen screws and remove blade & shims - obtain proper gage.

4. Exchange blueprint and blade for F.R. being S.U. - get gage set.

5. Dress regulating wheel.

A. Turn switch to dress to attain regulating wheel high speed.

B. Lower dresser slide on to cam.

C. Infeed dresser .001 or .002, turn outer traverse control valve clockwise (out) and counter-clockwise (for in). Inner traverse knob is for dresser traverse speed - repeat until wheel is completely clean.

D. Turn switch to grind to obtain running speed.

6. Blade setting.

A. Turn machine off.

B. Clean holder and work rest.

C. Insert blade in holder and tighten.

D. Check with scale to make sure blade is of equal height at both ends.

E. Standard height is 4.

F. Insert blade 1/8 inside of grinding wheel - break edge if needed.

G. Hold blade down when tightening in work rest.

7. Setting blade to grind wheel.

A. Bring grinding wheel to within .020 of blade.

B. Use .020 shim to insure clearance of blade to grinding wheel.

C. Lock grinding wheel handwheel.

8. Adjusting regulating wheel to touch point of valve.

A. Jog regulating wheel - where high side is next to blade.

B. Loosen and drop V-block.

C. Turn regulating wheel handwheel clockwise to allow valve to rest freely on blade.

D. Infeed regulating wheel to touch point and lock.

9. Set kicker rod and valve location.

A. Drop valve manually - set kicker to proper grind length - can be adj. later.

B. Reset V-block to within .020 of head O.D. without touching O.D.

C. To infeed head locator - lock locator valvair. Adjust locator button to place valve in contact with kicker rod - do not over adjsut (or force) valve into kicker.

D. Unlock valvair to retract locator - eject valve.

10. Find size.

A. Check and adjust coolant.

B. Check diamond - replace if needed. Reset and dress grinding wheel.

12/19/83

C. Grind valve to .001 oversize.

D. Check size - taper - blend - R.O. - flat spots & chatter.

E. Use micrometer to obtain final size.

F. Obtain O.K. from supervisor and inspector.

TROUBLE SHOOTING 12-1/2 LANDIS

1- STEM RUNOUTS

A- Check blade height - wear & for loose blade
B- Check regulating wheel speed
C- Dress regulating wheel
D- Check for play in regulating wheel bearings
E- Check bad forging & insufficient stock
F- Check coolant spout on valve and on dresser

2- BURNT STEMS

A- Check diamond & speed & infeed
B- Check diamond gear box & cable
C- Check coolant spout alignment
D- Dress regulating wheel
E- Check regulating wheel speed
F- Check bad forging & insufficient stock

3- STEM CHATTER

A- Check height & for loose blade
B- Check number of pieces on dress
C- Dress regulating wheel
D- Loose regulating wheel
E- Check locator for proper location of valve
F- Check for proper drag
G- Check V-block clearance
H- Check for play in regulating wheel bearing
I- Check regulating wheel alignment to grinding wheel
J- Check regulating wheel directional drive motor - if brushes are bad, motor speed will change - check with supervisor

4- STEM SIZE VARIATION

A- Check blade height & wear and for loose blade
B- Check diamond and infeed - also for play in post
C- Check hydraulic oil level
D- Check wheel guard clearance
E- Check for proper amount of coolant
F- Check for proper drag
G- Check for play in regulating wheel bearings
H- Loose regulating or grinding wheel
I- Check regulating wheel speed
J- Check locator for proper location of valve

5- WHEEL OR BLADE MARKS

A- Check proper coolant spout alignment
B- Check kicker rod and assembly
C- Check blade wear
D- Check diamond
E- Dress regulating wheel
F- Check V-block clearance
G- Check valve on ready finger for proper release
H- Check stem guide

6- GRIND LENGTH VARIATION

A- Check locator
B- Check for broken or worn blade
C- Check alignment of regulating wheel pocket with kicker cam
D- Check for broken kicker rod and kicker assembly
E- Check coolant for proper setting
F- Check for heavy shoulders from forging.

BEST COPY AVAILABLE

S.O.P.

SEGREGATION OF REJECTED PARTS

408-4

PURPOSE :

TO ELIMINATE THE POSSIBILITY OF DEFECTIVE PARTS GETTING PAST VISUAL INSPECTION

REASON :

CORRECTIVE ACTION FOR WAUKESHA ENGINE

S.O.P. :

ALL VALVES SET ASIDE AT VISUAL MUST BE CLEARLY MARKED WITH RED MARKING PENCIL. ONCE THE PARTS ARE REPAIRED, THEY ARE TO BE PLACED IN 10 SLOT BOXES FOR VISUAL PERSONNEL TO REVIEW. *ONCE THE REPAIRED PART IS RE-INSPECTED FOR ALL DEFECTS* AND IS ACCEPTABLE, VISUAL PERSONNEL WILL REMOVE THE RED MARKING AND PLACE THE PART IN TRAY FOR SHIPPING.

TRW VALVE DIVISION

QCO -	406
DATE:	3/31/92
PAGE NO	1 of 5

QUALITY CONTROL ORDER

TPFC-1903 REV. 3 PRINTED IN U.S.A.

SUPERSEDES:	QCO NO. 406	PAGE NO. All	DATED 2/8/90	PART NAME Valves

PROCEDURE FOR HANDLING AND CONTROLLING DISCREPANT MATERIAL

1.0 PURPOSE:

To establish a uniform and well understood procedure for identifying, controlling, segregating and dispositioning of discrepant material. To ensure that the disposition of discrepant material is responded to within seventy-two (72) hours at the Cleveland Valve Division.

2.0 SCOPE:

This QCO applies to the raw material, any parts received from outside vendors in-process and finished goods in the Cleveland Valve Division.

3.0 DEFINITIONS:

3.1 "Material" is referred to broadly as raw material, any part, component, or finished product used in the manufacturing process.

3.2 Discrepant material is any material which does not conform to all applicable product drawing requirements, operational sketch requirements, engineering specifications, material specifications, acceptance standards, quality requirements, process specifications, or TRW workmanship standards.

4.0 RESPONSIBILITY:

4.1 The quality assurance and manufacturing departments are responsible for ensuring that all nonconforming material is properly identified, segregated, dispositioned or disposed of within the established time. The quality assurance department is responsible for notifying the customer of any suspected or nonconforming material shipped to them.

4.2 The manufacturing/quality department is responsible for:

A. Stating the cause of the discrepancy.
B. Notification to the proper causing department or area.
C. Determining the action to be taken on discrepant material, i.e., standard repair, sort, scrap, use as is, or request a deviation.

QUALITY CONTROL: Chas D. Tursdon	ENGINEERING:	LAB.	CUST. REP.
INSPECTION: Frank E Holupka 3/31/92	MANUFACT.:	GOVERN. REP.	PREPARED BY: Ernest A. Semle 31/3/9

TRW VALVE DIVISION

QCO -	406
DATE:	3/31/92
PAGE NO.	2 of 5

QUALITY CONTROL ORDER

TPFC-[illegible] REV. 3 PRINTED IN U.S.A.

SUPERSEDES:	QCO NO. 406	PAGE NO. All	DATED 2/8/90	PART NAME Valves

4.3 The quality department is responsible to interface with appropriate parties (plant manager, production manager, product engineering, process engineering, materials laboratory and the customer) and provide a timely response (72 hours) on deviation requests.

5.0 **PROCEDURE:**

5.1 If a nonconformance is found by a supplier, incoming inspection, lab, manufacturing, floor inspection or outgoing audit, the quality/manufacturing department will red tag the nonconforming material and affix the red tag to all logical groupings (tubs, pans, skids, pallets, boxes, etc.).

5.2 The following sections of the "do not use," red tag are to be filled out by the person initiating the red tag:

A. part number (FR)
B. date
C. originator's master number (inspection number)
D. reason held
E. quantity suspect
F. department
G. shift
H. shop order number and/or lot number
I. last operation completed

5.3 Quality department informs materials management and manufacturing of the nonconformance, and the customer if the nonconforming parts were suspected to have been shipped to the customer.

5.4 Manufacturing/material control moves the red tagged material to the appropriate bonded area.

5.5 Quality/manufacturing departments review the red tagged material in the bonded area for the following corrective action: scrap/repair/sort/use with deviation/use as is.

5.6 Quality department audits the red tagged material after the corrective action is taken and removes the red tag and records the corrective action.

QUALITY CONTROL:	ENGINEERING:	LAB.	CUST. REP.
INSPECTION: Frank Holupka	MANUFACT.	GOVERN. REP.	PREPARED BY:

TRW VALVE DIVISION

QCO.	406
DATE:	3/31/92
PAGE NO.	3 of 5

QUALITY CONTROL ORDER

TPFC-1903 REV. 3 PRINTED IN U.S.A.

SUPERSEDES:	QCO NO. 406	PAGE NO. All	DATED 2/8/90	PART NAME Valves

6.0 DISTRIBUTION:

6.1 The red tag will remain affixed to the nonconforming material until the proper corrective action is taken: scrap/repair/sort/use with deviation/or use as is.

6.2 The white copy of the red tag will be returned to the quality office. The quality office will issue a DMR report listing all material held in the bonded areas. The DMR report will be issued monthly to the manufacturing managers, the production control manager and the plant manager.

6.3 The red tag will be initialed and removed from the nonconforming material when the proper corrective action is taken. The red tag will be initialed by the person who audits the material for proper corrective action. The red tag will then be returned to the quality office.

QUALITY CONTROL:	ENGINEERING	LAB.	CUST. REP.
INSPECTION: Frank Holupka	MANUFACT.	GOVERN. REP.	PREPARED BY:

TRW VOCABULARY LIST

accessible
alignment
allowable
alterations
angular
appropriate
attentive
average
barrel
blend
blueing
blueing cone
butts
carrier
chamfer
chrome
clutch
CNC
collet
comparator
compensation
compressed
concentric
concentricity
controller
conveyor
correction
crib
cylindrical
Datum
detector
diameter
dimensions
dresser
erratic
exhaust
extrude
fault
flights
forge
gage
hub
idlers
index
induction
inspection
interference
jam
manual
mean
median
mike
parallel
plating
plating
precision
procedure
process
profile
profilometer
projected
projection
proprietary
ratchet
regulating
retracted
rotary
schematic
segregator
shear
sketch
solution
SPC
specifications
spindle
SQC
statistical
symmetrical
taper
thimble
tolerance
traverse
treatment
trends
troubleshooting
ultrasonic
visual

VISUAL DEFECTS

Barber Poles

Burnt Heads

Burnt Stems

Shaved Heads

Blow Holes

Cracks (ODs-Stems-Tips)

Forging

Steps in Blends

Nicks (raised metal)

Flaky Heads

Rough Under Heads

Mixed Valves

Bad Stamps

Chrome (Bad and None)

Chatter

Wheel Marks

u/s Stems

OBJECTIVES

SESSION 8

- Demonstrate ability to draw logical conclusions
- Read and interpret job-related instruction
- Practice job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB I
SESSION 8

FOLLOWING INSTRUCTIONS

THE OLD ADAGE ABOUT FOLLOWING THE INSTRUCTIONS

WHY FOLLOW INSTRUCTIONS?

REASONS	EXAMPLES

TECHNICAL INSTRUCTIONS:

112

STEPS TO SIMPLIFY INSTRUCTIONS

Instructions may be written in an orderly easy to read format. These usually include numbers, a logical sequence and easy to understand language.

Example:

1. Complete all information on form.
2. Sign and date form.
3. Mail form to this address _____, in envelope provided.

The form may end up being impossible but the directions are clear.

In most cases the order in which the steps are preformed is very important. What if step 3 above was performed before steps 1 or 2 ?

Often a routine task, especially at work, becomes so automatic that the steps are hard to explain. When you think of the steps of a procedure, explain and order the steps as if you were guiding a person who had never done the task. Keep their safety in mind!

ACTIVITY 1

The next set of instructions needs to be placed in the proper order. Give it a try.

COMMUNICATIONS ON THE JOB I
SESSION 8

ACTIVITY 1

Place these instructions in the proper order. Fill in the correct number of each step 1-8 in the blank.

TO CHANGE A LIGHT BULB TO A HIGHER WATTAGE:

__________ Take higher wattage bulb and place into the socket.

__________ Turn on power to socket.

__________ Gently hold bulb and unscrew in counter clockwise motion.

__________ Obtain higher watt bulb.

__________ Place old bulb in a safe place

__________ Leave power to socket off.

__________ Hold bulb gently and screw clockwise into the socket until tight.

__________ If old bulb is still lit, turn it off and let it cool. Don't touch hot bulb!

STEPS TO SIMPLIFY INSTRUCTIONS (CONT'D)

So far we have looked at instructions that have easy to identify steps. Instructions also come written in paragraph form. These can look very confusing and overwhelming at first. Any set of instructions can be reworked to make them easier to follow. You may already have a method that comes in handy. It may almost be an automatic thinking process.

Here is a method that separates instructions into manageable parts. This method combines the memory systems of association and classification that were presented earlier in this course. It also presents the word **PRAISE** as a mnemonic or memory assisting device. The word PRAISE helps you remember the steps in order. It also reminds you to give yourself credit or **PRAISE** after you successfully use this method.

1) **P** ositive, ____________________

attitude ____________________

credit ____________________

2) **R** ead ____________________

the whole picture ____________________

3) **A** sk ____________________

and answer ____________________

What ____________________

What ____________________

What ____________________

Why ____________________

4) **I** dentify words ____________________

What kind? ____________________

115

COMMUNICATIONS ON THE JOB I
SESSION 8

5) **S** pecial equipment ______________________

equipment ______________________

materials ______________________

information ______________________

needed ______________________

6) **E** asy action words ______________________

Red Flag Words = **ACTIONS**

Examples **load** the bin.

insert the cutting tool.

record the weight.

116

STEPS TO SIMPLIFY INSTRUCTIONS (CONT'D)

After completing the six **PRAISE** steps remember to:

- Complete each step of the instructions in the correct order.

If you will use these instructions often:

- Create your own set of instructions to help you remember the steps.

If the instructions are in paragraph form use:

- PRAISE Step 6 - **Easy Action Words** to help break it up into individual steps. Make one step to a line with it's own verb.

ACTIVITY 2 Try it!

Care of Rules

The steel rule is a precision tool and should be kept in the best condition. This can be accomplished by keeping the rule clean. Whenever the rule is used near or around water or with sweaty hands, the rule should be wiped dry and oiled to prevent rusting. Some of the common abuses which should be avoided are the using of the rule for a screw driver, a scraper, or a pinch bar to pry one part free from another.

Remember! A steel rule is a precision-made measuring tool - use it as such.

CONTEXT AND LOGICAL CONCLUSIONS

CONTEXT

Define: ____

____

____

Requires __________ reading.

1) ____

2) ____

3) ____

These three skills = ____________________ which is crucial for technical reading.

Your Facilitator will guide you through the following activities and discussions.

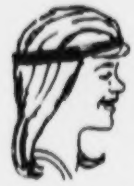
ACTIVITY 3 Context Clues

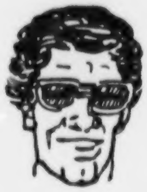
ACTIVITY 4 Inferring from Context

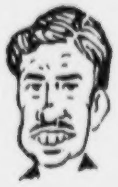
COMMUNICATIONS ON THE JOB I
SESSION 8

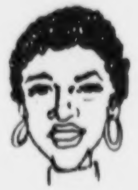
ACTIVITY 3

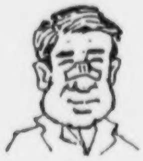
To be a successful technical reader, you must be a "detective" and find clues in your reading. Many descriptions and instructions are sketchy and hard to understand. In this activity match the descriptions to the suspects. Fill in the correct letter for each match.


A


B

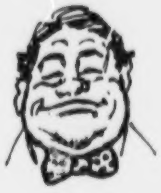

C

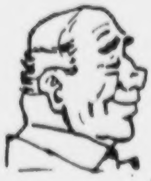

D

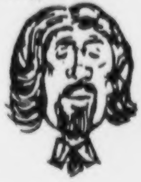

E

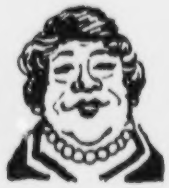
This suspect:

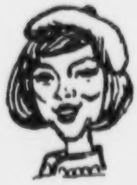
SAMPLE: __G__ 1. has a thinning hay loft.
______ 2. remembers to dot the ties.
______ 3. is a real pearl.
______ 4. never uses a razor.
______ 5. wears shades and a dimple.
______ 6. wears hoops instead of shooting them.
______ 7. loves petite caps.
______ 8. has a cut about the rest.
______ 9. better see the orthodontist.
______ 10. is in a band.


F


G


H


I


J

Did you have trouble matching these descriptions to the suspects? To be successful, you had to carefully read the brief descriptions; then search for clues to link them to the illustrations. When reading technical information, even if it is poorly written, you must find clues which improve communication between the writer and the audience.

From: READING AND UNDERSTANDING TECHNICAL INFORMATION by Richard Marsh

ACTIVITY 4

How Grandpa Came into Money

He was a sweet man, my grandfather, but when the brains were passed out he must have been somewhere else. I still respect how Grandmother could raise a family on his earnings.

Perhaps you can understand what it meant when, one fine day, Lady Luck smiled on Grandfather. He got himself in a train wreck.

Now, if something like that happened to you (and you lived through it) you had it made. The railroad would pay. So all of the lucky people on the train knew exactly what to do: they began to groan loudly and twist about on the ground while waiting for the doctors and stretchers to come.

All but Grandfather!

Never in his life had he missed a meal and he was not going to start now. No sir! Not for a little trainwreck. So he cut himself a walking stick and set out for home—a three hour walk.

In the meantime, the news of the wreck had already reached our town and the news had reported, "No deaths."

I cannot describe the many looks that passed across my grandmother's face when she saw her husband come strolling in the door, covered with dust, a bit tired from his long walk, but safe and smiling for he was just in time for dinner. First came joy at seeing that her man was not hurt. Then the joy turned into anger.

Grandfather had passed up his one and only golden chance.

So Grandmother turned into a kind of wild storm. Before he knew what was happening, he found himself without his pants and in bed. His complaints did him no good. Grandmother slapped a wet towel on his head while Mother went to search for the only medicine we had in the house—castor oil!

Grandfather cried out in fear and tried to hide under the blanket, but Mother dosed him anyway. Poor man! The only thing he really needed was his dinner. But what could he or anyone else do once his wife and daughter had made up their minds.

And then came the time of waiting. The two women did all they could do to keep Grandpa in bed and coached him carefully on what to say when the railroad people came. Grandpa nodded and said he would do as he was told. However, he bribed one of us children to find his pants for him and got out of bed anyway.

And out of bed he was when the insurance people from the railroad came to our town. Pants, boots, and all, grandpa was stuffed into bed and the covers were pulled up to his chin. The shades were lowered, the castor oil was placed by his bed, and the insurance people were brought in.

From the first minute it was clear that Grandpa had forgotten all of the careful coaching. He beamed a welcome to the insurance people and told them how well they looked. He then went on to talk about the weather and crops. When the railroad doctor was able to get a word in and asked him what injuries he had gotten in the train wreck, my grandfather smiled and said, "There's really nothing at all wrong with me that 100,000 dollars couldn't cure."

Mother promptly fainted. Grandmother screamed and ran out of the room. The insurance men doubled up with laughter.

After they had stopped laughing and revived my poor mother, the insurance men gave Grandpa 5,000 dollars—making him the richest man in our little town.

But to his dying day, Grandpa could never understand why the insurance men had given him the money.

Adapted from "How Grandpa Came into Money"
by Else Zentner

COMMUNICATIONS ON THE JOB I
SESSION 8

About the Story. Choose the best answer from the four choices and write it on the line.

1. Who was telling the story in "How Grandpa Came into Money"? ___________.

   (a) Grandpa
   (b) Mother
   (c) the granddaughter
   (d) the grandmother

2. What does Grandpa seem to like best? __________.

   (a) farming
   (b) food
   (c) money
   (d) train rides

3. The other people on the train were ___________.

   (a) badly injured
   (b) faking injuries
   (c) in a state of shock
   (d) killed

4. The grandmother's *first* feeling when she sees Grandpa coming in the door is _______.

   (a) calm
   (b) happiness
   (c) in a state of shock
   (d) sadness

5. Grandpa is given castor oil because __________.

   (a) Grandmother is angry with him
   (b) he is ill from the train wreck
   (c) he needs a little castor oil now and then
   (d) there is no other medicine to give him

6. When the insurance men come to the house, __________.

(a) Grandpa is being given a dose of castor oil
(b) Grandpa is eating dinner
(c) Grandpa is nude
(d) Grandpa isn't where he's supposed to be

7. Which of the following is *not* part of Grandmother's plan to convince the insurance men that Grandpa has been injured in the train wreck? __________

(a) She lowers the shades.
(b) She pulls up the covers.
(c) She puts Grandpa in bed with his clothes on.
(d) She puts castor oil by his bed.

8. When Grandpa answers the insurance men's questions about his injuries, the men are __________.

(a) amused
(b) angry
(c) confused
(d) disgusted

9. Why did the insurance men give Grandpa the money? __________.

(a) He has such an awful wife.
(b) He needs it.
(c) He is so humorous.
(d) We don't really know why.

10. The family in this story lives__________.

(a) in the city
(b) in a town
(c) on a farm
(d) on an island

Explain how your answers depended on the context of the story:

____

____

____

OBJECTIVES

SESSION 9

- Demonstrate study skills techniques in various learning situations
- State components of active listening
- Identify effective communication techniques when faced with difficult job situations
- Practice effective communication techniques when faced with difficult job situations
- Practice job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB I
SESSION 9

ACTIVE LISTENING

WHAT IS LISTENING?

Listening is:

- Taking in information and meaning from other people. This is done without passing judgment while trying to have empathy.
- Encouraging talkers to continue communicating
- Providing limited but positive input to help a talker carry an idea forward.

To help us more fully understand what listening is, consider the following two questions:

1. What does it feel like to really listen to someone else?

   ____

   ____

2. What does it feel like when someone really listens to you?

   ____

COMMUNICATIONS ON THE JOB I
SESSION 9

THREE LEVELS OF LISTENING

Level One - This level of listening combines two parts of what you hear from the speaker. 1) the content or ideas and words the speaker is using 2) The intent or purpose of the speaker. At this level the listener tries not to judge the speaker. The listener also tries to understand and identify with the speaker. This is empathy.

Level Two - Hearing, but not really listening. At this level, listeners hear the words, but often miss the speakers deeper. Some of the meaning carried in nonverbal signals.

Level Three - Passive listening is not really listening at all. Listeners may be daydreaming, or thinking about where they'll go for lunch. Some people who listen like this are always concentrating on what they want to say next.

Three Levels of Listening

Everyone listens at different levels at different times. We listen better in some situations than in others. For example, some people listen effectively on the job, but "tune out" when they get home. Each of the three levels of listening has specific features to it. These levels are not distinct lines of differences, but rather, are general categories into which listening behavior falls.

Level One/At this level of listening we are using listening skills. We refrain from judging and being critical of the talker. Internal distractions are avoided or kept at a minimum. We place ourselves in the talker's position, attempting to see things from his or her point of view. This is what Janet was doing when she was listening to Jeff. Some characteristics of this level include: taking in main ideas; acknowledging and responding; not letting ourselves be distracted; paying attention to the total communication of the speaker, including his or her intent; not judging or finding fault; awareness of what the talker is expressing nonverbally.

Level one requires listening not only for the content of what's being spoken, but, more importantly, for the intent and feelings of the message as well. This is done while showing both verbally and nonverbally that we are truly listening.

Listening at Level One/In the video you just saw, Janet was listening to Jeff at level one. At this time you may wish to view the video a second time, noting any behavior you may have missed the first time. Particularly note how Janet is using level one skills.

Information we listen to at level one will be more easily remembered by processing what we are listening to. Processing means associating what is said with something familiar to us, repeating the information internally or out loud, or summarizing what the person has said. People speak at a rate of about 200 to 250 words per minute while listeners can process information at about 300 to 800 words per minute. What is done with that time lag will strongly influence what level we listen from.

In addition to using the association or summarization techniques, as a listener you can visualize what is being said by attempting to see in your mind's eye what the person is saying. In essence, you will be simultaneously listening to and seeing what is being said.

Depending on the situation or person, the levels of listening may overlap or interchange. As we move from level three to level one our potential for understanding, retention, and effective communication increases. We began developing our listening style very early in life. As we grow older we continue to reinforce our habits and patterns, although not many people are aware that they listen from these three levels and that each level has elements that affect listening effectiveness.

©Madelyn Burley-Allen, 1984

Level Two/At the second level of listening we move from an empathic, attentive listening state to one of "hearing." We hear words, but are not paying close attention to the talker's intent, tone or voice inflection, facial expression or body posture. We stay at the surface of communication and are unaware of the deeper meaning of what is being said.

At this level, we remain emotionally detached from the conversation, hearing words but not fully participating in the interaction. This level of listening can be dangerous because misunderstandings may occur since the listener is only slightly concentrating on what is said. Talkers could be lulled into a false sense of being listened to and understood at this level.

Level Three/When we are listening at this level we are in a passive, withdrawn state; in other words, "tuning the person out." This level includes daydreaming, mental tangents, thinking about something else, forming rebuttals, or thinking about what we are going to say when the other person stops talking.

Listeners do not remember much of what is said when listening at this level. It may be stored somewhere in the brain waiting for recall, but probably won't be recalled because we weren't paying attention. Listening at this level can be compared to some kinds of reading. If you have ever switched into "automatic" while reading a boring report or book and finished a page without having any idea what you have read, you can understand what level three listening is.

© Madelyn Burley-Allen, 1984

BARRIERS TO LISTENING

- Filters - screen what we hear ______
- Bias = changes what we hear ______
- Assume = We think we know what we hear ______
- Hearing What We Want to Hear ______
- Only Using the Thinking of our own Culture ______
- Negative Emotions ______
- What our words mean to others ______
- Misreading Nonverbal Cues ______
- Physical Problems ______
- Daydreaming ______

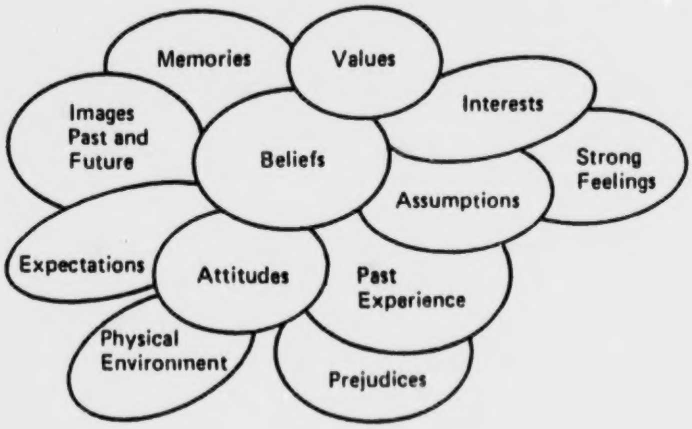
SOME BARRIERS THAT PREVENT ME FROM LISTENING EFFECTIVELY:

______

______

Listening Through Filters

We are often unaware of how our childhood experiences influence our adult behavior. The socialization process results in our listening through filters. Our brain processes each new piece of experience through filters that have various forms. The following diagram shows some of the filters that exert the greatest influence:



Although these filters are within us, we are often blind to them. It is important to develop the ability to become conscious of these blind spots that often result in unproductive behavior. We will then have an opportunity to understand and reshape our beliefs, values, and attitudes.

People aren't aware of their beliefs so they have little opportunity to understand them and/or reshape them. When people aren't aware of how their beliefs influence what they value about work and their attitude toward certain behaviors in others, they find it difficult to listen to the other person's point of view or accept their behavior.

Say, for instance, I'm your supervisor, and I strongly believe that when people talk and enjoy their work they aren't getting their work done properly. Because of my belief, I value silence and seriousness on the job. I also have the attitude that people who kid around don't perform as they "should" and are more trouble than they are worth.

On the other hand, you believe that a relaxed and enjoyable working environment keeps work from being drudgery and makes it acceptable. Because of this belief, you value an understanding, easy-going supervisor. You have the attitude that a supervisor who doesn't kid around a little is a "turkey."

Now, if we both are unaware of our attitudes, we would probably have difficulty dealing with each other. We would both find it arduous listening to the other's point of view since the views are in opposition. Our beliefs could even lead to contempt for each other, thus interfering with our ability to work things out.

The belief that we hold in reference to each other's work behavior will result in both of us having certain expectations of each other, and because our beliefs are so different, our expectations are rarely realized, leaving us both disappointed and frustrated. On the other hand, if both of us could gain understanding of our own as well as the other's belief, we might start listening to each other's point of view.

HEARING WHAT YOU WANT TO HEAR

As you discovered in the preceeding quiz, a listening barrier exists when someone hears what he wants to hear and not what is really communicated. Barriers to listening happen because of one or several filters. For example, past experience filters can make a listener become anxious to hear something that fulfills his or her wishes or desires.

This often happens in business settings, where one person is selling merchandise to another and the salesperson wants the sale to be as large as possible. Jeanne related this story:

> I was working on the order desk for a company that supplied materials for large conferences. One week before, my supervisor had checked with a client about how many packets they needed for their program. She was told that they had only eight registrants. However, they expected more, and she was asked to check back with them.
>
> My supervisor was called out of town, and I was asked to follow up on this client. Well . . . I checked with them for the number of registrants they had now. The client told me eighteen. In my desire to sell the most materials possible, I heard eighty.
>
> Three of us spent three hours getting the materials ready. When the delivery man brought the materials to the client, he was told they only needed eighteen packets, not the eighty we had prepared. I could have fallen through the floor when he told me. I was so embarrassed!

Jeanne expected to hear a larger number because of her anticipation and desire to fill a large order. This caused her to hear incorrectly. As a result, the company lost three hours of work by three people.

BIASED LISTENING

Another block to listening occurs when we form an opinion about the level and value of what will be said. We label the information ahead of time as unimportant, too boring, too complex, or as being nothing new, and we are anxious for the speaker to get to the point.

A biased listener tends to distort the message positively or negatively, often getting so emotionally involved that listening efficiency suffers. Certain emotionally laden words, sometimes referred to as "red flag" or "buzz" words, can evoke strong feelings and thus create barriers to effective listening. We sometimes respond to a word or phrase in a way that has been conditioned by our past experiences. In other words, we have attached meanings to the same word from prior, emotion-laden situations. Sometimes words can affect a listener to such an extent that his reaction will result in Level 3 as his emotions are causing internal distractions to occur, thus interfering with Level 1 listening. Unconsciously, we tune out what we negatively label.

Every day words provoke different feelings or ideas in different people. These emotion-laden words often have a strong impact on people that interferes with listening. Tones of voice have the same kind of impact.

PHYSICAL BARRIERS

The last internal barrier is the physical barrier: what happens physically that influences an individual's listening efficiency. At certain *times of the day,* we have more energy than at others. *Fatigue* is a factor in listening, since listening takes concentration and effort. When we don't feel up to par, we have a more difficult time being attentive.

It is easier to daydream and become preoccupied when our energy level is low. When we have personal problems, our energy is often used to deal with the problems, which lessens the amount of energy we have available to listen at Level 1. Personal problems sometimes manage to creep into our minds while someone else is talking.

Another element that can cause fatigue is the "time-lag factor"; the average speaker talks about 200 words per minute, while a listener can process information at around 300-500 words per minute. It is easy to spend this time-lag daydreaming, going on mental tangents, and thinking of personal problems. It takes energy to use this time difference for more productive use, such as internally summarizing what the person said, visualizing what is being said, or associating what is being said with something already stated. Because Level 1 listening takes energy and concentration, it is easy to allow these factors to interfere with it.

The fatigue barrier is often prevalent during meetings, especially those held at the end of the day or in the evening. People attending have already expended considerable energy getting the day's work done. Along with this low-energy factor, listening at meetings can be boring. Most often, the agenda does not have the same interest for all those who are attending.

In this case, it would be important to listen at Level 2 to make sure you aren't missing information you will need. If what is being said pertains to you, you could then move to Level 1, in which you would process the information. You might even want to jot down some notes to be used later as memory-triggers.

SEMANTIC BARRIER:
THE MEANINGS ARE IN PEOPLE, NOT WORDS

We each have our own meanings for words because we filter them through our varied beliefs, knowledge, education, upbringing, and experience. As a result, no two people have exactly the same meaning for the same word or expression; meanings are not in words, meanings are in people.

The dictionary contains thousands of words. However, the average adult uses about 500 of these words most often, and each has between twenty and twenty-five meanings! So, two people can use 500 words with the possibility of 25,000 different meanings!

A word is simply a representation of the thing it names or describes. It is not the thing itself, and may mean something different to the speaker than it does to the listener. The practice of summarizing what you believe the speaker said, as a check, can insure understanding.

We make judgments about people, based on how we understand what we see and perceive. We evaluate an individual's competence and motivation through our semantic filters.

Have you ever tried to moderate between two people who are arguing, and you had to say, "Wait a minute, he didn't say what you said he said." Usually, people do not purposely change what people say; they simply do not hear the same words in the same way that the words were said. I have a sign that I display in my seminars which reads: "I know you believe you understand what I said, but I'm not sure you realize that what you heard is not what I meant." Everyone receives sensory data in a unique way; it is not "raw" data, but rather, data that is filtered and interrupted by the receiver.

THE EFFECTS OF EMOTIONS ON LISTENING

Along with words that affect our biases that lead to emotions, there are some areas we do not want to talk about, topics that we have an emotional reason for not wanting to discuss . . . these areas are also "hot buttons" for us. When another person pushes our "hot buttons" with a word, phrase, or topic, our mind goes through certain filters: past experiences, beliefs, or biases connected to what the other is saying. As a defensive measure, we often "tune out" the talker, plan rebuttals, or formulate questions to confuse the talker.

If something is said that might cause us to change our perception, we feel threatened. Potential change in our perceptions can involve strong feelings. Often, the first feelings are frustration and confusion. To reduce these feelings, we flee mentally from what is being said by tuning out what the talker is saying or by distorting it so we won't have to alter our perception, belief, or opinion.

Experiencing high emotions, either positive or negative, usually interferes with listening ability. Strong feelings are one barrier that influences effective listening and sometimes causes confusion and the taking in of information in a disorganized manner, as illustrated by June's experience.

> I'm a case worker, which means I deal with people who come into our agency for help finding a job. I was so sympathetic to what they were saying, I became overly emotional and found it difficult to think objectively. When I did this, I couldn't think effectively and didn't obtain all the information I needed to match the client to the proper job.

June had developed a habit of listening almost entirely with her feelings. As a result, she was not taking in the kinds of information she needed to get her job done properly. She often became overanxious, which accelerated her tension level.

STYLES OF LISTENING

● **The Faker -**	Fakers pretend to listen. They actually get caught up in giving the impression that they're paying attention. They really are not listening at all.
● **The Pleaser - Listener**	These listeners want to please others. Instead of listening, they're concentrating on impressing the other person.
● **The Interrupter -**	Interrupters are so focused on what they want to say that they often don't even hear others. Worse yet, they interrupt them while they're talking to make a point. Many times what they say, doesn't relate to what the talker is saying.
● **The "How - Do WE Look" Listener**	These listeners focus on how the conversation is going. They want to create a positive image when they're speaking. The focus is on the appearance of themselves or others. They're distracted by how the conversation is going. It's hard for them to listen effectively to what the speaker is saying.
● **The Intellectual - or Logical Listener**	Intellectual listeners hear only what they want to hear. They often concentrate on the facts only, ignoring emotional or nonverbal communication. So, what they really do is block out more than half of what the talker is really trying to communicate.

STYLES OF LISTENING

The Faker

Some people fake attention. They pretend to listen when their minds are actually off on a flashing tangent. They may fake attention because they think they are pleasing the talker. Often, people who wish to be attentive have their eyes riveted on the speaker. Their ears appear to be wide open. They so exhaust themselves in playing the attentive role that they end up no longer listening at all. Have you ever watched a person fake listening by smiling and head-nodding, when neither the smile nor the head-nodding matched what the speaker was saying?

Others try hard to fake being good listeners by trying to memorize every fact given; thus, the intent of the message becomes lost. However, they give the impression of listening with intense interest and curiosity. This need to hear and digest everything being said can easily lead to an overloading and jamming of the communication network.

The Dependent Listener

Some listeners are highly dependent and live vicariously through the opinions, wishes, and feelings of others. Often, their feelings are evoked in interpersonal communication situations, making it difficult for them to deal with abstract matters. So much concern is given to how they are listening and reacting to the talker, that they miss out on what is actually being said. In their urgency to elicit a favorable impression from the talker, they focus on how they appear to others, rather than on the clarity and content of what they are saying.

> Dave's father dominated his relationships when he was young. He often told Dave, "Children should be seen and not heard." When Dave expressed an opinion on a subject, his father told him he was stupid and not old enough to know the right way to do things. Often in their interactions, Dave's father would say, "You'd better listen to every word I'm saying, young man!"
>
> As a result of this communication, Dave became a dependent listener. He put his effort into appearing to listen in order to please others. He often felt confused and frustrated. He also felt like a doormat because he went along with other people's wishes at the expense of his own. He discovered he didn't have many opinions of his own because he let others do his talking for him. In his relationships with his co-workers, he was afraid to say no. This behavior pattern resulted in his feeling tense, unhappy, and victimized.

The Interrupter

Sam had a habit of interrupting when others were talking. He thought he'd forget what he wanted to say if he didn't interrupt. He often felt anxious if he wasn't able to say what was on his mind. Many times, the people he worked with became frustrated and annoyed by his behavior.

While completing a self-awareness exercise, he discovered he was so busy focusing on what he wanted to say that he listened at Level 2 or 3. In the process, he wasn't considering the speaker's needs. During a practice session, in which he had to paraphrase what the other said, he became conscious of his internal process. He started to think of what he wanted to say after the speaker had spoken only a few words. After he became aware of this internal process, he could stop and direct his attention to what the speaker was saying. He found he could remember what he wanted to say by associating what the speaker had said with the information he wanted to discuss.

Bringing up something that doesn't relate to what the speaker is saying is another form of interruption. Often, this is done when the talker is discussing something the listener is uncomfortable with and feels threatened by. The listener takes the conversation off on unrelated tangents, as a means to side-step the issue being discussed. The speaker gets so involved in the side issue, the real issue is never dealt with.

Paul had an employee, Fred, who came late to work three to four times a week. Paul had approached Fred about his lateness on several occassions. He became discouraged because the conversation ended up going around in a circle.

Paul: You came in 15 minutes late again this morning. You should be on time.
Fred: I'm a good worker, and I've been with the company ten years.
Paul: I think you're a good worker too, but you have to be at work on time. That's the rule!
Fred: I can't do everything right. I keep trying to get to work on time, but I just can't seem to do it. Anyway, I get my work done.
Paul: Why don't you get up earlier in the morning as I told you to!
Fred: I try to, but I can't. Anyway, Janet over there takes longer breaks than I do. I don't know why you only pick on me.
Paul: I don't think Janet takes longer breaks than anyone else in the office. I don't pick only on you. When others infringe on the rules, I talk to them too. Can you try to get to work on time from now on?
Fred: Yeah, I'll try.

This can be a discouraging and frustrating experience, yet it happens often. Problems don't get resolved when one person is able to side-track the real problem. When you find yourself in this situation, a couple of statements can be used.

For example when Fred said, "I'm a good worker, and I've been with the company ten years." Paul could have said, "I appreciate your good work and time with the company, but that's not the reason for this discussion. The issue is your lateness. I want it to stop, and I want to know how you are going to end this situation."

Or, when Fred said, "anyway, Janet over there takes longer breaks than I do," Paul might have said, "That's not the issue here," or, "That's not relevant to our discussion; we are talking about your lateness," or, "Right now I'm only concerned about your lateness."

By using such statements, Paul could control the discussion *and* solve the problem.

The Self-Conscious Listener

Some individuals focus too much attention on themselves by thinking, "Am I doing well or badly?" "Do I look all right?" or "I wonder if the talker thinks I'm intelligent?" These people give attention to themselves as participants when it would be better to involve themselves in the content and meaning of the conversation.

Self-consciousness can also be viewed as a kind of preoccupation with internal matters at the expense of effective listening. When people become too concerned about how well the discussion is going, they often lose their spontaneity and become overly involved with themselves during the conversation. Our society has unspecified standards as to how much people are allowed to be carried away by the talk, and how thoroughly they are to permit themselves to be caught up in the conversation. People who become too involved give the impression that they don't have self-control over their feelings and actions. This can lead the listener to draw away from involvement with the other person. What is one person's over-eagerness can be another's alienation. In this kind of situation, the speaker is forced to adjust to the listener's state of emotion because the listener is incapable of adjusting his own.

The Intellectual or Logical Listener

The intellectual listeners listen mostly with their heads, hearing only what they want to hear, blotting out larger areas of reality. Because they are mainly interested in a rational appraisal, perhaps as a result of their educational training, they tend to neglect the emotional and nonverbal aspects of the speaker's behavior. Their evaluation of what is said is most often geared to the interpretation of verbal statements, often causing them to miss the speaker's less obvious intent.

They are not aware of how listening behavior affects others or how others affect them. They listen in terms of categories, making certain that what they listen to does not disturb their inner peace or systematic order. It is almost as if they are putting what the talker is saying into a computer's data bank. If a statement doesn't fit into a systematic logical sequence, their minds reject what is said as invalid. I refer to this process as getting into "analysis paralysis."

These types of listeners are so involved in programming what is being said, that they miss out on the deeper meaning of what is spoken. These types of listeners cut off experiencing through the sensory system, thus losing the opportunity to actually experience the event. The brain is so busy making calculations, that the body isn't given the chance to feel the communication. As a result, nonverbal communication is disregarded. All this is happening because the listeners are blind to their own emotions and the emotions of others.

> Frank was a computer programmer whose job demanded that he analyze information focusing on what might be wrong or how a program could be improved. To succeed at his work, he had to pick information apart, listen to what could go wrong, and compute information in a logical, systematic manner.
>
> He was so busy analyzing what was communicated to him, he didn't have time to just be there with the other person. His wife often told him he was a nit-picker. She felt he was overly critical of her and the children because he seldom accepted what she said. He would challenge her thought processes. He spent most of their communication time analyzing what she said as if he had to turn it into a program.
>
> This listening pattern had a serious effect on his marriage and social life. After becoming aware of the pattern, he took steps to change it outside of his job. It took a lot of concentration and effort to change this pattern, but he said it was more than worth it.

OK ATTITUDES

1. I'm Ok - You're OK

2. I'm OK - You're Not OK

3. I'm Not Ok - You're OK

4. I'm Not OK - You're Not OK

OK Positions

The socialization process includes the position of "OKness" in relation to self and others. According to Dr. Berne's theory, there are four positions: (1) I'm OK-You're OK, (2) I'm OK-You're Not OK, (3) I'm Not OK-You're OK, and (4) I'm Not OK-You're Not OK either, so there!

The listening behavior of individuals in the different OK positions varies; thus, each has different listening characteristics that include one's beliefs about oneself and others which, in turn, influence the attitudes and ways a person interacts with others.

Greg's father's style of listening matched the "I'm OK-You're Not OK" pattern. Greg, a supervisor in a large federal agency, incorporated many of his father's listening behaviors. As a result, his employees didn't feel that he listened to them. Greg had the attitude, "Who needs to bother listening to "Not OK" people; they don't have good ideas anyway."

Others in the office often complained that Greg listened to them with a critical expression on his face. He would quickly judge and criticize what they had said. And, he seemed to listen only to what he had to say, as if he were the only one who had good ideas. When someone brought up an opposing point of view, Greg would hear what he wanted to hear, filtering out comments he didn't agree with. His manner and listening style often left people feeling dumb and stupid. Thus, Greg listened much the same way as his father, not realizing how his behavior was negatively affecting others. In other words, this listening behavior was in his blind area.

Kathy, on the other hand, held the "I'm Not OK-You're OK" position. Her behavior was very different from Greg's. She often worried about herself and how she was coming across. She focused on herself rather than on the dynamics of what was going on between herself and others. She was so busy trying to say the right thing, she usually didn't say anything. During meetings, she was reluctant to speak up because she believed what she had to say would be stupid. She often said, "I will probably say something dumb, so why bother!" Because she was behaving from the "Not OK" position, she usually listened at Level 2 or 3. The consequences: instructions carried out poorly, messages taken down incorrectly, and frequent criticism from her supervisor.

The "Not OK-Not OK" position is very detrimental to listening and the entire communication process. People behaving from this position vaccilate between the two before-mentioned OK positions. They listen most often from Level 3, and as a result, do not hear others. They do not make the effort to listen to what others say. Since neither they nor the others are OK, they find very little reason to bother listening, they are rarely interested in what anyone has to say. They are usually perceived as disinterested in others, withdrawn, negative, and pessimistic. This behavior leads nowhere. It's felt by those experiencing it as "going around in circles," ending in frustration, anger, and discouragement. You'll hear these people say, "I can't do anything; there's nothing anyone can do!" Because of the attitude, not much *does* get done. Problems don't get resolved, and the same ones crop up over and over.

On the other hand, if parents, teachers, and other adults model effective listening behavior by focusing attention on speakers, acknowledging speakers without being judgmental, and communicating through their faces, bodies, tones of voice, and words, that the speakers are important, children will be more likely to develop positive concepts, exhibit effective listening behavior, and operate from the "OK-OK" position. Effective listening patterns, as well as non-listening patterns, can become habitual. Undesirable patterns *can* be changed, although it requires continual awareness and practice.

Where the "Not OK" styles usually close off communication, the "OK-OK" style is categorized as open, understanding, logical, empathic, and relaxed.

Allan described his parents as understanding and easy to talk to, tolerant, and accepting of his behavior. Whenever he had a problem, they would listen and help him come to a solution while supporting his decision and encouraging him to follow it through.

As a manager, he applied these same listening skills to the people on the job. His expectations of himself and others were realistic and valid. People felt comfortable around him because he didn't quickly judge or criticize. He had a mutual respect for himself and others while accepting the significance of people. Co-workers often said, "I like him; he really listens to me."

Like Janet in Chapter 1, he listened with understanding, had an open mind, and didn't interrupt or ask unnecessary questions. He often reflected feelings that were expressed by paraphrasing for understanding and summarizing for mutual clarification.

Being aware of this "OK" phenomenon, this aspect of human behavior and how it influences listening, can be beneficial in quickly improving listening behaviors. It's an easy way to modify your behavior in a short time.

Drama Triangle

Another aspect of the socialization process is the "drama triangle." When individuals act from the "Not OK" behavior mode, they frequently participate in a drama triangle that has three types of participants: persecutor, rescuer, and victim.[4]

The *persecutor* operates from the "I'm OK-You're Not OK" position. People behaving in this mode often are fault-finding, nit-picking, can't wait to say "gotcha," and are blemish players; no matter what you pass over their desk, they find something wrong with it and might even circle the mistake in red so you have to do it over again. Persecutors are experts at zeroing in on what people do that's wrong, rather than right. Their management and supervisory styles are to "manage by exception—what goes wrong is what is paid attention to." If something is out of line, they give a negative stroke. They are quick to form a rebuttal to what has been said, and often listen to how something is going to fail or not work. People often feel as if they are being treated like dumb and stupid children after communicating with a persecutor.

Rescuers are advice givers. They take on other people's monkeys and make the problems their own. These people are rescuing others who don't need to be rescued, don't want to be rescued, and aren't asking to be rescued —but they rescue them anyway because it's good for them! They take over others' responsibility; they have to do it themselves. Like persecutors, they are operating from the "I'm OK–You're Not OK" mode. They have a strong need to be relied upon and feel OK when doing things for others. They tell their employees what to do and when it doesn't go right, the rescuers get blamed, and thus, end up victims.

They tend to be lousy delegators—"gotta do it themselves." This results in feeling victimized because their own work doesn't get done and pressures build up. They end up working 10–12 hours when everyone else is going home on time.

They build dependency relationships between themselves and their employees by solving the employee's problems, doing their thinking for them, and figuring out what should be done. They become indispensable and have constant interruptions during the day. When a person is talking, they are so busy thinking of the best advice to give, they don't listen to the whole problem; as a result, often, the advice given is inappropriate.

> Tim, a supervisor, found out that he often listened and behaved from the rescuer mode. He decided that not only was it detrimental to his employees' professional growth; he also discovered that the rescuer mode left him little time for his own work and was plagued by interruptions. He found some distinct advantages to giving it up: he had more time for himself, he finished his own projects on time (resulting in less hassles from his boss), he felt decreased stress and tension, and the people he supervised became more self-reliant and confident. He said he had to be on his toes to stop himself from giving advice, often stopping himself in the middle of a sentence. Tim discovered that his listening habits changed. Because he stopped forming advice in his head while the person was talking, he listened more frequently at Level 1. As a consequence, he remembered more of what was said to him.

Like Tim, some people behave from the rescuer mode by taking on others' responsibilities, doing others' work, thus not having time to do their own. When people do this, they end up victims. Therefore, they have moved from the rescuer mode to the victim mode. Then there are others who *start* in the victim mode by behaving in such a way that they incite others to "kick" them verbally, nonverbally, emotionally, or physically.

When people start out in the victim mode, they are operating from the "I'm Not OK–You're OK" position in ways that result in their getting negative strokes: not listening to directions, allowing their emotions to over-ride their objectivity, and becoming defensive instead of listening. Marie, a secretary in a computer company, discovered she behaved from this position in her relationship with others—especially her boss:

> I often feel victim in my interactions with my boss. I think he is the persecutor and I'm the victim. For example, late Thursday afternoon,

> my boss gave me a twenty-page project with graphs and numerical tables to type and finish by Monday at 10 a.m. I didn't listen to the time he stated when he handed me the project. Instead, I was busy figuring out how I was going to get it done and finish the other work I had on my desk. All I heard was Monday.
>
> As I look back on this situation, I can see that by not being clear on the time, I was already setting myself up to be a victim. Discussing with him my concern about getting it out on Monday, along with completing the other assignments on my desk, would have kept me out of the victim position.
>
> In any event, I didn't take either of these options. Instead, I became nervous and frustrated, which led to errors and my typing the project more slowly. By 10 a.m. Monday morning, I had it typed but not proofread. You can imagine my surprise when my boss asked for it! I told him I didn't hear him say it was due at 10 a.m. It was finished, but not proofread. Naturally, he became angry at my comment that I didn't hear him say it was due at 10 a.m. and he said a few choice words I won't repeat. However, he reluctantly extended the time by an hour so I could get it proofread.
>
> Well, by this time I was so nervous I had to have a cup of coffee. I took the report down to the cafeteria. Again, I can see this was another set-up on my part to end up victim. You don't take important projects to the cafeteria. It would have been better to forego the coffee until after I'd proofread the material. But . . . I didn't!
>
> While I was proofreading, an emergency came up. In my hurry to take care of the emergency, I left the report on the table, completely forgetting it. Guess who came down to the cafeteria and found the report? Yep! My boss. He brought the report to me and said critically, "Are you by any chance looking for this?" and threw it on my desk. Was I embarrassed!

This example was just one of the many ways Marie discovered that she set herself up to be victim. Upon examining her listening habits, she found that her nonlistening habits resulted in other kinds of nonproductive behavior such as not completing tasks as directed. She discovered she talked to herself mentally while her boss was giving her instructions. This internal dialogue distracted her from what was being said. She found she could stop this internal process by being aware of it, stopping the dialogue, and then summarizing what the other person said as a way of checking her listening.

These "OK" life positions play a major part in each person's listening behavior. As you can see from the graph that follows, these positions of "OKness" are formed early in childhood. They are a reflection of our self-concept and they influence our attitudes about others that can result in ineffective or effective listening behavior. Being aware of what "OK" positions we are listening from can be a giant step in improving our listening habits.

This socialization process is an important ingredient in determining the "OK" positions from which people behave. It is a significant factor that causes many of the listening problems people experience. Graphically, the process is summarized like this:

SOCIALIZATION PROCESS

①

Childhood experiences

- Family system: verbal, nonverbal communication patterns
- Personality of close adults
- Positive, negative recognition, attention (strokes)
- Don't messages

influences →

②

Early childhood decisions—the beginning of the self-concept

- Imageries of self:
  - —internal dialogue
  - —affirmations of self, positive or negative
- I can't do anything right
- I'm stupid
- I can think
- I do things right

influences →

③

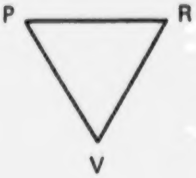
"OK" life positions: feelings of "OKness" or "Not-OKness" of self and others

- "I'm OK-You're OK"
- "I'm OK-You're not OK"
- "I'm not OK-You're OK"
- "I'm not OK-You're not OK"

influences ↓

④

Drama Triangle



← influences

⑤

Adults' self-concept and beliefs:

- Which is demonstrated in the following ways:
  - —Attitudes
  - —Prejudices
  - —Values
  - —Perceptions
  - —Behavior and feeling patterns

Video Exercise 2-1

Video Overview/This video vignette is divided into two segments. Both portray a supervisor, Paul, confronting one of his employees, Fred, about his tardiness. The first segment shows Paul talking to Fred about his tardiness from the not-OK attitude mode. You will be asked to write down your observations of both Paul and Fred.

Turn on the videotape to the vignette "Lateness — Poor Model." Watch and listen to the brief dialogue between Paul and Fred. Observe specifically what Paul does to prompt Fred to respond in a negative manner.

Video Instructions/Before carrying out these instructions read them over carefully.

1. Turn on the videotape to the vignette "Lateness — Poor Model."
2. Listen to and watch the two-minute confrontation between Paul and Fred. When the vignete is over turn the tape off. You will watch the good model after you have written your responses to the poor model.
3. After you have listened to and watched the vignette, open your "Participant Exercise Booklet" to page 2-5 and answer the questions.
4. After completing the questions, turn to page 2-6 in your "exercise booklet" to find an explanation of the answers. Compare your answers to the explanations to find out how you did.

© Madelyn Burley-Allen, 1984

COMMUNICATIONS ON THE JOB I

SESSION 9

VIDEO VIGNETTE - LATENESS - POOR MODEL

1. What kinds of behavior did Paul use that show he was in a not-OK attitude mode?

2. How did Fred respond to Paul's not-OK behavior?

3. Did they solve the lateness problem? Why or why not?

1. What kinds of behaviors did Paul use that indicated he was in a not-OK attitude mode?

   Paul sat on his desk. He pointed and shook his finger at Fred. He used *should* and *have to*; words that many people have an emotional reaction to. Because of Paul's manner, Fred felt threatened and attacked. Paul's tone of voice was condemning, angry and he had a critical look on his face. Paul did not ask questions that could have helped Fred work through his problem, instead he told him what to do.

2. How did Fred respond to Paul's not-OK behavior?

   Fred responded by becoming defensive. He tried to justify his behavior by pointing the finger at another employee hoping to divert Paul's attention.

3. Do you think the lateness problem has been solved? Why or why not?

   The problem hasn't been resolved. The interaction was one of attack and counterattack. Since Fred didn't solve his own problem, he had no interest in making it work. The exchange was more like a parent telling a child to be on time. This kind of behavior doesn't usually work with adults.

© Madelyn Burley-Allen, 1984

Video Instructions/Before carrying out these instructions read them over carefully.

1. Turn on the videotape to the vignette "Lateness — Good Model."
2. Listen to and observe the two-minute confrontation between Paul and Fred. When the vignette is over turn the tape off.
3. After you have listened to and watched the vignette, open your "Participant Exercise Booklet" to page 2-8 and answer the questions.
4. After completing the questions, turn to page 2-9 in your "exercise booklet" to find an explanation of the answers. Compare your answers to the explanations to find out how you did.

© *Madelyn Burley-Allen, 1984*

COMMUNICATIONS ON THE JOB I
SESSION 9

VIDEO VIGNETTE - LATENESS - GOOD MODEL

1. What were the main differences between the two demonstrations?

2. What indicates to you that Paul was listening to Fred at level one in the OK-OK attitude mode?

1. What were the main differences between the two demonstrations?
   - **Paul was sitting in a level position.**
   - **Paul didn't say *should* or *have to*, or point/shake his finger at Fred.**
   - **Paul didn't get sidetracked when Fred pointed out the other employee's behavior, but brought the conversation back to the lateness issue.**
   - **Paul was calm, direct and kept the conversation moving toward a solution.**
   - **Paul avoided labeling Fred's behavior by describing it instead.**

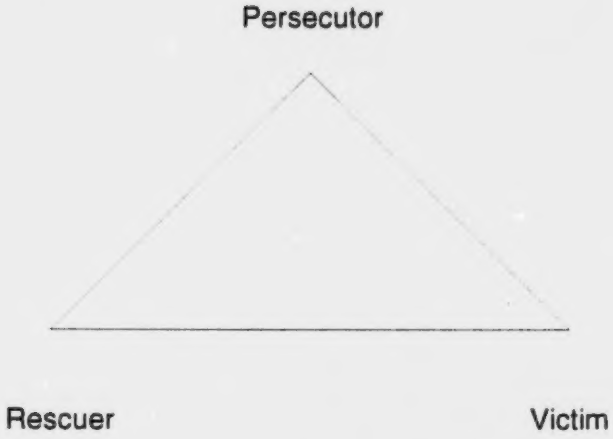
2. What indicated to you that Paul was listening to Fred at level one in the OK-OK attitude mode?

   Paul acknowledged what Fred said by responding to his feelings and summarizing what Fred said. His OK-OK listening mode was a major factor in the willingness of Fred to take action to solve his own problem.

©Madelyn Burley-Allen, 1984

COMMUNICATIONS ON THE JOB I
SESSION 9

THE DRAMA TRIANGLE



Video Exercise 2-2

Video Overview/In reading assignment 2-2, you learned that not-OK attitudes move people into the "Drama Triangle." In this next vignette you will watch a manager, Tim, discussing with Marian, an assembly line supervisor, the problem she is having with excessive rejects on her line. You will watch and listen to how Tim starts to solve Marian's problem for her, becomes aware of what he is doing, and moves out of the rescuer mode and asks Marian what her ideas are. Pay special attention to how Tim's behavior affects Marian in a positive way.

Turn on the videotape to the vignette "Staying Out of Rescuing." Listen to and analyze the four-minute discussion between Tim and Marian.

Video Instructions/Before carrying out these instructions read them over carefully.

1. Turn on the videotape to the vignette "Staying Out of Rescuing."
2. Listen to and watch the discussion between Tim and Marian. When the vignette is over turn the tape off.
3. After you have listened to and watched the vignette, open your "Participant Exercise Booklet" to page 2-12 and answer the questions.
4. After completing the questions, turn to page 2-13 in your "exercise booklet" to find an explanation of the answers. Compare your answers to the explanations to find out how you did.

© Madelyn Burley-Allen, 1984

VIDEO VIGNETTE - STAYING OUT OF RESCUING

1. What did Tim do to stop himself from rescuing Marian?

2. What effect did Tim's listening behavior have on Marian?

1. What did Tim do to stop himself from rescuing Marian?

   Instead of telling Marian what she ought to do, Tim paused, moved back in his chair and said to Marian, "What are your thoughts about what you could do to resolve the problem?"

   He avoided rescuing Marian again when she asked him, "What do you think I should do?" by saying, "Before I answer your question, let's take a minute to look at some of the things that can help employees become more conscious of quality."

   Tim provided Marian with a framework to analyze her problem, explore alternatives, and solve the problem herself.

2. What effect did Tim's listening behavior have on Marian?

   Marian's confidence in herself was raised because she found out she could solve her own problem. Her opinion of Tim and their relationship was enhanced, allowing them to work more cooperatively. Her competence as a supervisor was improved.

©Madelyn Burley-Allen, 1984

DEALING WITH DIFFICULT COMMUNICATION SITUATIONS

Many factors combine to create difficult communication situations. Can you name a few?

Others:

Communication does not occur in a vacuum. Any communication situation involves people, words, emotions, attitudes, and non-verbal interactions. Can you name any other ingredients that add to the communication "stew"?

DEALING WITH DIFFICULT COMMUNICATION SITUATIONS

The I-Messages Approach

	I-Messages Approach		You-Blaming Approach
1.	This approach leads to a win/win win/lose resolution.	1.	This approach usually leads to a resolution.
2.	Develop plan of action, like a meeting time, to talk about the prblem situation	2.	There's no plan of action.
3.	One person reveals something he or she is unhappy about in hopes of changing both people's behavior to solve the problem.	3.	One person discloses something he or she is unhappy about with the intent of letting the other person know he or she should change.
4.	This approach uses the OK-OK attitude mode.	4.	This approach uses one of the not-OK attitude modes.
5.	This approach sticks to behaviors and does not attack or negate other persons feelings.	5.	This approach promotes confrontation that dumps negative feelings on another person.
6.	The person is aware of nonverbal behavior, both their own, and the other person's.	6.	The person is unaware of either person's nonverbal behavior.
7.	The person states a message in a nonblaming, noncritical manner.	7.	The person states a message in a blaming, critical, judgmental manner.
8.	The person takes responsibility for his or her own feelings.	8.	The person blames the other person for his or her feelings.
9.	The person observes and states by using I-messages what behavior is causing a problem.	9.	The person labels the behavior as good or bad, right or wrong.
10.	The person tries not to use words that push the other's hot buttons.	10.	Deliberately uses words that push the other's hot buttons.

DEALING WITH DIFFICULT COMMUNICATION SITUATIONS

The I-Message Approach

Some Examples

I-Messages	You-Blaming Messages
I'm embarrassed when you criticize me in front of my co-workers. I feel it's degrading to me.	You're always embarrassing me by criticizing me constantly in front of my co-workers.
I feel angry when you don't get your work done on time. I think it makes the whole department look bad.	You make us look bad because you never get your work done on time.
I expect you not to take longer than 10 minutes for a coffee break.	You're always taking long breaks.

Now it's your turn. Below are two you-blaming statements. Change them to I-message statements.

I-Message	You-Blaming Message
	You always leave your workstation a mess and I'm stuck cleaning up after you.
	You never tell me what's going on. You act like I don't even work here.

COMMUNICATIONS ON THE JOB I
SESSION 9

DESCRIBING BEHAVIOR

DO's	DON'Ts
Stay with what a person does.	Make comments about what you think a person is.
Use adverbs that relate to specific actions.	Use adjectives that label someone.
Ex: He talked loudly in the meeting.	Ex: He's a loudmouth.
Describe what occurred.	Use labels that judge what's happened.
Ex: When we don't agree, the problem usually doesn't get resolved.	Ex: You're wrong to be so stubborn.

COMMUNICATIONS ON THE JOB I

SESSION 9

VIDEO VIGNETTE - DESCRIBING BEHAVIOR #1, #2, #3 AND #4

1. How do the two kinds of statements differ?

2. What are the main benefits of using the **describing behavior**?

COMMUNICATIONS ON THE JOB I
SESSION 9

DESCRIBING BEHAVIOR EXERCISE

Change the statements below to describe behavior rather than label people. You'll have to use your imagination to fill in specific facts.

Sally, you're just trying to show Geri up.

Rick, you're such a slowpoke.

Carlos, you're very rude.

Don't fly off the handle now, Marla.

POSITIVE FEEDBACK VS. PRAISE

Positive Feedback	Praise
A positive comment with meaning that specifically lets the listener know what the speaker values	A positive judgment with little additional meaning
Specific, related to a task	General and non-specific
A statement of observation and appreciation	Value judgment such as right, wise or good
Identifies behavior and describes the listener did	Labels behavior and judges what the listener did
Rings true	Can be taken as phony

VIDEO VIGNETTE - PRAISE/POSITIVE FEEDBACK #1, #2, AND #3

1. What is the major difference between the two approaches?

2. How well did Jon, June, and Stella do in carrying out the criteria for stating positive feedback?

PRAISE/POSITIVE FEEDBACK EXERCISE

Change the statements below to provide positive feedback rather than praise. You'll have to use your imagination to fill in specific facts.

Jack, you really do good work.

____

____

Tina, you're such a nice person.

____

____

I can't believe how thoughtful you are, Mario.

____

____

Joyce, you're so talented.

____

____

ROLEPLAYING EXERCISE

Each person in the group is assigned to one of the roles on the next page. After reading and putting some thought into how to play your role, act out the following scenario with the people in your group.

Scenario: Roy is responsible for safety in his department. There are two other employees in his department, George and Brian. George doesn't follow safety standards as he should. George often doesn't wear his safety glasses, piles boxes higher than is safe, and sometimes has boxes jutting out into the aisle. Roy would like to get George to change his behavior. He knows that instead of judging and labeling George, he has to speak to him using the describing behavior approach. Roy speaks to George about his unsafe practices with the goal of getting him to commit to changing his behavior.

Brian, on the other hand, does a good job following safety practices. Roy wants to let Brian know that he recognizes and appreciates how Brian follows the safety rules. He realizes that he needs to use positive feedback rather than praise so that Brian will feel he's sincere and to keep Brian motivated to continue following safety practices. Roy talks to Brian about his behavior using positive feedback.

ROLEPLAYING EXERCISE (cont'd)

Roy:	Not a supervisor, but charged with the responsibility of safety in his department. His first reaction to George is to tell George that he's careless and to tell George what he should do. But Roy realizes that this approach won't do much to change George's behavior. That's why he decided to use the describing behavior approach and good listening skills to get George to change his safety ways. He also knows it would be easier to just tell Brian, "Good job." But he realizes this won't motivate Brian to keep up the good work or win Brian's trust for the future. He reasons that giving positive feedback about specific behaviors will show Brian that he does notice and appreciate Brian's contributions to department safety.
George:	Doesn't really care about safety. He just does whatever's easiest at the time. When Roy first approaches him about his unsafe practices, he tells Roy that neither he nor any other employee has ever been injured by anything he's done or not done. But because Roy listens to him and doesn't judge him, Roy is able to persuade him to change his practices by pointing out how he could benefit from following safe practices.
Brian:	Always tries to co-operate. However, he is a little suspicious when people praise him. He sometimes feels that because he's co-operative, people take advantage of him. When someone praises him, he figures they just want something out of him. When Roy talks to him about his safety practices, he's not sure Roy's sincere and tries to figure out what Roy really wants. But as Roy continues talking, he realizes that Roy is sincere and just wants to recognize him for following safety rules and keep him motivated in the area of safety.

COMMUNICATIONS ON THE JOB I
SESSION 9

ROLEPLAYING EXERCISE - EVALUATION QUESTIONS

1. What types of statements were used to show that Roy was using describing behavior rather than judging and labeling?

2. How did the describing behavior approach help George to commit to changing his safety behavior?

3. What types of statements were used to show that Roy was using positive feedback rather than praise?

ROLEPLAYING EXERCISE - EVALUATION QUESTIONS (cont'd)

4. How did positive feedback help to create a rapport with Brian?

5. What other good listening skills were demonstrated by Roy?

COMMUNICATIONS ON THE JOB I
POST - ASSESSMENT

1) Name the four Preferred Learning Style categories represented by these initials:

V

A

K

T

2) Name one of the three components of effective learning.

____

3) List below 4 skills that help people learn more effectively:

____________________ ____________________

____________________ ____________________

4) The dictionary is considered a " power tool ". True False

5) Phonics skills are an important part of adult reading. True False

6) Name two types of dictionaries that are useful everyday.

____________________ ____________________

7) Name 2 components of a dictionary page.

____________________ ____________________

8) How many consonants are in the English alphabet? ____________________

9) The letters **w** and **y** are: (circle one answer)

consonants   vowels   both consonants and vowels

10) Circle the words with the short **e** sound:

she   verse   fret   Pete

bench   these   press   wed

11) A person's attitude is an important part of the reading process. True False

12) Name two of the four major components of Reading.

____

____

13) A person should always try to maintain the same reading speed no matter what they are reading. True False

14) Reading is learned only at an early age. True False

15) A person must read every word to be a "good" reader. True False

16) If you read very fast you should still try to remember everything you read. True False

17) Name three good reading habits.

____

____

____

18) One word can have several different meanings. True False

19) A homophone is a ______________________________

____

20) Asking a co-worker is an acceptable way to find out what a new technical word means? True False

21) Read the following:

Producing a quality product at a fair price is the goal of any manufacturing plant. Therefore, quality control must be an important aspect of TRW's process. Product quality can be controlled in two ways.

What is the main topic of this reading:

____

____

22) Define the following TRW terms:

Dresser ______________________________

Shear ______________________________

Collet ______________________________

SPC ______________________________

Process ______________________________

23) What is the proper spelling of the circled word on this sign.

---

24) If you wanted to make this go faster, which knob would you turn ? (circle one)

left center right

S:\WSHARE\GRANT\NEWCOM2\COM2PRE ZIR

25) Is the verb in the sentence on the white ticket correct? Please write the correct verb on the line.

____

ZIRCOA

Communications

on-the-job

© 1994, Cuyahoga Community College - UTC

This curriculum was developed with support from the U.S. Department if Education, National Workplace Literacy Program. Reproduction of this curriculum in part or total, with the customary credit to the source, is permitted.

I

Facilitator Manual

ZIRCOA COMMUNICATIONS ON THE JOB I

SESSION OVERVIEW

10 2-hour sessions

Session 1

Self-Awareness and Personal Learning Styles	60 minutes
Pre- assessment	45 minutes
Task/Productivity Matrix	15 minutes

Session 2

Successful Learning Strategies	60 minutes
Active Listening Skills	45 minutes

Session 3

How to Deal with Difficult Communication Situations	45 minutes
Role-playing Exercise	30 minutes

Session 4

Phonics Review	60 minutes
Using the Dictionary	60 minutes

Session 5

The Process and Types of Reading	90 minutes
Job-related Vocabulary Improvement	30 minutes

ZIRCOA COMMUNICATIONS ON THE JOB I

SESSION OVERVIEW (cont'd)

Session 6

Recalling Factual Information, Identifying Main Ideas	60 minutes
Job-related Vocabulary Improvement	30 minutes

Session 7

Homophones and Homographs	30 minutes
Following Instructions, Drawing Logical Conclusions	60 minutes
Job-related Vocabulary Improvement	30 minutes

Session 8

Prefixes and Suffixes, Synonyms and Antonyms	30 minutes
Reading Technical Manuals	60 minutes
Job-related Vocabulary Improvement	30 minutes

Session 9

Reading for Meaning - Memos, Processes and Procedures	60 minutes
Job-related Vocabulary Improvement	30 minutes

Session 10

Identifying codes and symbols on schematics and blueprints	60 minutes
Job-related Vocabulary Improvement	30 minutes

ZIRCOA COMMUNICATIONS ON THE JOB I

OBJECTIVES

Upon completion of the Communications on the Job I course, the participant will be able to:

- Identify ways to overcome personal obstacles to learning.
- Identify his or her personal learning style
- Demonstrate study skills techniques in various learning situations.
- State components of active listening.
- Identify effective communication techniques when faced with difficult job situations.
- Demonstrate ability to locate specific information in a dictionary.
- Identify situations in which a technical dictionary is needed.
- Demonstrate skills for using a technical dictionary.
- Identify and apply a vocabulary-building system.
- Demonstrate job-related word recognition
- Identify components of the reading process.
- Demonstrate phonics skills.
- Differentiate between the meanings of common prefixes and suffixes.
- Identify and select synonyms, antonyms, homophones and homographs.
- Demonstrate reading skills of recalling factual information, identifying main topics, and drawing logical conclusions with job-related documents.
- Read and interpret job-related instructions.
- Identify codes and symbols used in schematic and blueprint reading.
- Read, analyze, and prepare job-related memos, processes and procedures.

ZIRCOA COMMUNICATIONS ON THE JOB I
PRE - ASSESSMENT

1) Name the four Preferred Learning Style categories represented by these initials:

V

A

K

T

2) Name one of the three components of effective learning.

3) Mark each statement about listening True or False:

_____ People tend to pay attention to what interests them.

_____ Hearing and listening are the same.

_____ Most people have a short attention span and have trouble concentrating on the same thing for too long.

_____ The speaker is totally responsible for the success of communication.

_____ When a listener's emotional level is high, he or she will be an effective listener.

_____ Listening is a natural process.

_____ Listening is a skill.

_____ Listening requires little energy; it's "easy".

_____ Giving advice and telling the speaker what to do is not a listening skill.

_____ Speaking is a more important part of the communication process than listening.

4) List below 4 techniques that help people learn more effectively:

____________________ ____________________

____________________ ____________________

5) Describing a persons behavior is more helpful than telling them what kind of a person you think they are. True False

6) When a person labels a behavior good or bad, right or wrong, they are using an "I-Rational Approach" to communication. True False

7) Giving a person praise helps them work better. True False

8) Roleplaying is useful in training sessions. True False

9) The dictionary is considered a " power tool ". True False

10) Phonics skills are an important part of adult reading. True False

11) Name two types of dictionaries that are useful everyday.

____________________ ____________________

12) Name 2 components of a dictionary page.

____________________ ____________________

13) How many consonants are in the English alphabet? ________________________

14) The letters w and y are: (circle one answer)

consonants vowels both consonants and vowels

15) Circle the words with the short e sound:

she verse fret Pete

bench these press wed

16) A person's attitude is an important part of the reading process. True False

17) Name two of the four major components of Reading.

18) A person should always try to maintain the same reading speed no matter what they are reading. True False

19) Reading is learned only at an early age. True False

20) A person must read every word to be a "good" reader. True False

21) If you read very fast you should still try to remember everything you read. True False

22) Name three good reading habits.

23) One word can have several different meanings. True False

24) A homophone is a ____________________

25) Asking a co-worker is an acceptable way to find out what a new technical word means? True False

26) What does CNC stand for?

27) What does SPC stand for?

28) Read the following:

Producing a quality product at a fair price is the goal of any manufacturing plant. Therefore, quality control must be an important aspect of Zircoa's process. Product quality can be controlled in two ways.

What is the main topic of this reading:

____

____

29) Define the following Zircoa terms:

Slurry ____

____

Audit ____

____

Selects ____

____

Proprietary ____________________________________

____

Process ____

____

30) What is the definition of the LARGE word this cute guy is yelling?

31) If you wanted to make this go faster, which button would you push ?

OBJECTIVES

SESSION 1

- Identify ways to overcome personal obstacles to learning
- Identify his or her personal learning style

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB I
SESSION 1

Self-awareness

Introduce self and course briefly. Have students introduce themselves. Pass out any book or materials needed.

Show the video "The Train" (approximately 8 minutes long)
Have students write down the answers to the 3 handout questions listed below. Then take a few minutes to discuss the questions and their reactions to the video.

Handout Questions

What does "The Train" tell you about the power of your mind?

Have you heard of any other examples of people deciding something contrary to "fact" with dramatic results?

To what extent do you feel you control your attitudes? What circumstances do you feel take control away from you, and what would it take to get it back?

Some Reasons Why We Assume We Can't Learn

Keeping "The Train" in mind, let's look at how a limiting mind set affects our perception of our ability to learn. Many people assume they can't learn new things for a variety of reasons. What are some reasons you think people assume they can't learn. (List responses on board.)

Some Reasons Why We Assume We Can't Learn

o **Past Conditioning** - we were told we couldn't learn or that we weren't good at a particular subject or subjects.

o **Stereotypes** - How often have we heard statements like "He's a lathe operator, great mechanical ability, but his verbal skills aren't too good." or "She's wonderful at communicating with others, but technically, I don't think she has it"? In many cases, these statements reflect stereotypes present in our society and our companies. It's easy to buy into them, and create self-fulfilling prophecies so that we fit the stereotype.

Some Reasons Why We Assume We Can't Learn (cont'd)

- **Other People's Perceptions of Us** - Often, we're labelled, usually early in life. "He's the artist" or "She's the smart one" or "He has the mechanical mind." What happens is that we often get pigeon-holed. We also assume that we can only be good at what people tell us we're good at. Or conversely, we assume that we're poor at whatever people tell us we're poor at. We tend to live up (or down, as the case may be) to other people's expectations.

Successful Learning Experience

Ask participants to think of a recent successful learning experience, preferably job-related, but it really could be anything from learning a new sport to learning how to program their VCR. Have them describe this learning experience on the handout provided. Stress that it does not have to be a "classroom" experience. It probably will be something that they figured out on their own, by either reading something or through just hands-on experience, or something that someone else showed them how to do.

When they're finished with the handouts, ask participants to share this learning experience and why they wanted to learn this particular skill or task with the class. Keep track of the "whys" on a piece of paper or the board to work into the next section.

Mention that often we learn when we're motivated to learn. For instance, an immigrant to this country from Malaysia wasn't familiar with the American food, hamburgers. She wasn't sure what went on a hamburger. So, when she ordered a hamburger at a restaurant and they asked her what she wanted on it, she simply said "The works." She ended up eating all kinds of things like onions and ketchup that she didn't like. She finally decided to learn what went on hamburgers and what she liked. Eventually, when asked what she wanted on her hamburger, she was able to reply "Mustard and pickles, please." What was her motivation for learning?

Some Motivating Factors

As you discuss this, categorize the participant's "whys" of their successful learning experiences in each of these categories.

- **Money** - People will often learn new skills in order to gain a promotion or to get a new higher-paying job.

Successful Learning Experience (cont'd)

- **Comfort** - People are motivated to learn new skills if it will make their jobs easier.
- **Safety/Health** - If a skill is necessary to their safety or health, people usually view that skill as an important one to learn.
- **Status** - People will often learn new skills if they believe it will increase their status with their supervisor, their co-workers, and/or family and friends.

Personal Learning Styles

Not everyone learns most effectively in the same way. For instance, some people can learn how to operate machinery by watching a demonstration of it while others would learn best by reading the manual. Additionally, different skills need different learning styles. You can read the manual from cover to cover and learn all that's there, but until you actually operate the machine yourself, you really won't know how to operate it. So, while watching a demonstration or reading the manual may be a good starting point, eventually to master the skill, you're going to have to get some hands-on experience.

- **Visual** - Learns best through observation or studying graphs or charts. If you feel you learn a lot from demonstrations or you like to look at graphs, drawings, charts, maps, etc. in order to understand something, you may be a visual learner.
- **Auditory** - Learns best through listening. If you get a lot from lectures or like to listen to educational audiotapes at home or in your car, chances are you're an auditory learner.
- **Kinesthetic** - Learns best through movement or while moving. If you like to walk around or knit or tinker while listening to educational material or if you feel you're pretty good at picking up new sports moves after just one or two tries, it's a good possibility that you're a kinesthetic learner.
- **Touch** - Learns best through touch or "hands-on" experience. If you're the type of person who wants to just start operating a piece of equipment, or who wants to touch or feel objects to get a better sense of them, you're most likely a touch learner.
- **Olfactory** - Learns best through smell or taste. If you often associate things with a particular smell or taste, you very well might be an olfactory learner.

Preferred Learning Methods

- **Print/Individual** - Learns best through reading and writing. If you love to read and feel you learn a lot from manuals, magazines and books, you may be a print-oriented learner who likes to learn things on their own.

- **Interactive/Group** - Learns best through talking things out with other people. If you feel you learn a lot from small group discussions or by bouncing ideas off people, you may be an interactive learner.

To help them find out what kind of learners they are, have them complete The Learning Style Inventory. When they're finished, use The Learning Style Inventory Interpretation included on the next page in the handouts to help them interpret their inventory. Remember to mention, that's possible to have 2 styles of learning that are equally dominant. Ask them if they learning style identified with this inventory matches the learning style they think they are.

WHAT KIND OF LEARNER AM I?

Learning Style Inventory

Check below the techniques through which you think you learn best.

___ 1. motion pictures
___ 2. lecture, information-giving
___ 3. group discussions
___ 4. reading assignments
___ 5. role playing with you as a participant
___ 6. project construction
___ 7. odor discrimination activities
___ 8. television programs
___ 9. audiotapes
___10. participant in panel discussion
___11. written reports
___12. nonverbal/body movements
___13. drawing, painting, or sculpting
___14. tasting
___ 15. slides
___ 16. records
___ 17. question-answer sessions
___ 18. independent reading
___ 19. physical motion activities
___ 20. model building
___ 21. scented materials (i.e., scratch & sniff)
___ 22. graphs, tables, and charts
___ 23. recitation by others
___ 24. interviews
___ 25. writing
___ 26. participant in physical games
___ 27. touching objects
___ 28. photographs

WHAT KIND OF LEARNER AM I?

Learning Style Inventory
Interpretation

Circle the numbers you checked on the Learning Style Inventory. Find the row where the most numbers are circled and identify the learning style to the right of it. Most likely, that's your dominant learning style. It is possible to have 2 learning styles with the same or almost the same number of circles. In that case, you probably utilize both learning styles equally well.

NUMBERS	LEARNING STYLE
1, 8, 15, 22, 28	VISUAL
2, 9, 16, 23	AUDITORY
3, 10, 17, 24	INTERACTIVE/GROUP
4, 11, 18, 25	PRINT/INDIVIDUAL
5, 12, 19, 26	KINESTHETIC
6, 13, 20, 27	TOUCH
7, 14, 21	OLFACTORY

Learning Styles Activity

Have the class read through the following scenario and see if they can identify the learning styles of Tony and his supervisor, John. Also, identify any problems differences in learning styles caused in this instance.

Tony works for the Excellent Products Company operating a drill press. Recently, his company automated all the drill presses in the plant. Tony, along with all the other drill press operators must now learn to operate the automatic controls. Tony has been running the drill press for 5 years. Because he feels that the automation will make him more productive and allow him to learn new skills, he's sure he can learn to work with the automatic control system. The big question, of course, is how?

Tony's supervisor, John, brings him a copy of the big, thick manual that came with the new machinery.

"Everything you need to know is right in there," says John. "Read it."

Tony tries to read it. But it seems boring to him. What he does find useful are the drawings and charts. After a week of trying to read the manual, Tony decides to talk to John.

"I could look at this manual from now till retirement and never learn what to do. I need someone to show me how to use this thing!"

John said he understood and the next day, he worked with Tony. John patiently explained everything he knew about the machine to Tony. Tony kept wanting to push the buttons and check out the information for himself. Sometimes, although Tony didn't admit it to John, he felt lost by John's explanations.

When he was done explaining everything to Tony, John asked him to repeat the steps for certain operations. Tony couldn't do it successfully. "Walk me through it," he kept saying.

"I just did," insisted John.

"Well, if I could just try it one time, then I think I'll be able to remember it better," said Tony.

"No," said John, "Until you learn what to do, we can't take a chance on damaging the new machinery."

Learning Styles Activity (cont'd)

John walked away rather exasperated. Tony was left feeling very frustrated. "If I could just watch someone operating one of these babies, then I could pick it up," he thought.

The next day, Tony decided to take another route to learning the automated controls. He talked to some of the other drill press operators and found that one of the younger operators, Nancy, was skilled at operating automatic controls because of some vocational training.

Tony asked Nancy if he could watch her in action. "Sure," Nancy said.

That afternoon, Tony went over to Nancy's drill press. she first explained what she was going to do, then did it. Tony kept track of the buttons she pushed and in what order. "Can I try it?" he asked when she was done with the demonstration.

"Of course," said Nancy. "I'll cancel the program I just did and you start from scratch."

"Thanks," said Tony. He approached the controls. He was amazed when he remembered practically the whole sequence of events. Nancy just had to prompt him a couple of times.

"See, nothing to it," said Nancy when he finished successfully.

"Yeah, nothing to it," said Tony. "Wonder why it seemed so hard yesterday?" he thought.

Every day for a week, Tony worked with Nancy until he had all the basic operations down. John came by and saw Tony operating the automatic controls with skill and ease. "Really dug into that manual, didn't you, Tony?" he said. "I was beginning to think you were a hopeless case. Good job."

What kind of learner is Tony? Is there more than one style you can identify for him?

Haptic - wants to push buttons, operate the machinery. Also, visual - benefitted from someone showing him how to use the equipment and found the graphs and drawings in the manual helpful.

Learning Styles Activity (cont"d)

What kind of learner do you think John is? What kinds of problems did this cause between John and Tony?

John is a print learner. His first impulse is to read the manual and learn everything there is to know about the machine before actually operating it. While this might work for John, it doesn't work for Tony. John thinks everyone learns like he does. So when Tony can't learn effectively from the manual, John assumes (wrongly, of course!) that Tony simply can't learn.

Summary

In order to learn effectively, you must

- **Believe in yourself.**

As we've discussed, it's important to have the right attitude toward learning. You have to expect that you can learn, and you will. Of course, it won't always be easy, but with the right attitude, you can overcome any obstacles in your learning path.

- **Be motivated.**

As adults, it's important to motivate ourselves. Being motivated helps to maintain the right attitude. In order to keep ourselves motivated, it's important to know what we, as individuals, are going to gain from the training. Everyone will gain something a little different. It's also important to know why we, individually, are going through the training - to improve certain skills, to improve our jobs. In other words, what are the consequences for us to complete this training successfully.

- **Be aware of your personal learning style and take advantage of it, whenever possible.**

Knowing how you feel most comfortable learning will help you to get more out of this class, faster and more effectively. You certainly will be exposed to a variety of learning methods, but take advantage of your own learning styles whenever you can, during individual and lab study times in this class, and certainly on the job. Having this understanding about how we learn and realizing that everyone learns differently helps to keep us motivated through the learning process and helps to avoid some conflicts that commonly arise when working with others.

Instructor Guidelines for Task Matrix

This Matrix was created to help correlate On the Job Training objectives to Company Productivity Measures. The information obtained will be helpful in several ways:

1) It will encourage the participants to relate to their everyday basic skills to the Company's productivity measures. This should help correlate their improvement in these skill areas to the improvement of the company's bottom line/productivity

2) It will help directly tie instructional objectives, that are based on job analysis, to company productivity.

How to present the Matrix to participants:

At first the Matrix may look intimidating. This initial discomfort can be decreased by encouraging the participants to use a simple process for answering each item. After briefly reviewing the overall use/ reason for the Matrix, have the class scan the categories of each axis of the Matrix. There are really only three steps necessary to choose the desired number value to be assigned in each productivity measure.

Have the participants say:

1) **Do (or Does)** {e.g. Skill in 1st Skill Box} **subtraction miscalculations**

2) **Affect** {e.g. 1st Productivity Measure Box} **Zircoa's Selects/Scrap/Reworks ?**

3) **Choose** {e.g. from 1-5 scale } answer **that best fits their usual job tasks.**

After discussion and instruction on the Matrix in class, the participants should take the matrix to their work-site to have on hand while they work. They will ideally bring it to the next class and turn it in to the instructor. At that time participants may wish to discuss any insights that these direct correlations revealed. These are important insights into how Zircoa's productivity is correlated to the skills of it's workers.

OBJECTIVES

SESSION 2

- Demonstrate study skills techniques in various learning situations
- State components of active listening

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB I
SESSION 2

SUCCESSFUL LEARNING STRATEGIES

Study Skills Techniques

Now, that we know how to get a positive attitude toward learning, how to keep motivated and how to use our own personal learning styles, we're going to talk briefly about study skills techniques that we can use to help us get the most out of this course and others.

We'll be talking about the following 4 study skills techniques:

- Organization

- Concentration

- Notetaking

- Memory Improvement

Organization

In order to be successful in this class (and others), it's important to:

- Set a goal
- Plan how to reach that goal
- Act upon your plans

Each of these 3 steps is essential to success. If you set a goal, but never act on it, you won't be successful. And, if you just start taking action, without planning, you'll just spin in circles, and probably won't be successful either. In this class, we're going to help you with all 3 steps.

First, have students write down personal goals that they have for the Communications on the Job I class on the handout provided. These are for students' personal use and are not to be shared with the class. To help them, you may want to go over or suggest that they review course objectives.

ILP

Review that ILP's are a use of goal setting, plans and actions. Review how their ILP effects this course and those in the future.

Concentration

The next important study skill we want to use is concentration. It's going to be important to concentrate in class and when doing individual work. Concentration allows us to be much more efficient and learn more effectively. When we concentrate, we don't have to ask another participant what the instructor was talking about while were daydreaming, and we don't have to read and reread instructions or books, because our mind wandered off somewhere in mid-sentence. The ability to concentrate is important to learning success.

What is concentration? Summed up briefly, concentration is thinking. When we're thinking about something and aren't aware of distractions going on around us and we're deeply involved in understanding the concepts, we're concentrating. Once we become aware that we're concentrating, however, we no longer are. Or if we start to notice little noises or listen to the conversations around us, we're not concentrating anymore. To sum up, consider this quote:

> *Consider the postage stamp. It secures success through its ability to stick to one thing until it gets there.*
>
> *-- Josh Billings*

Either read or have students read the concentration activity scenario. Ask what seems to be Pat Hawkins' problem? What kinds of things indicate that he's having trouble concentrating?

Use the concentration activity to tie in the next section on what breaks our concentration.

Concentration Activity

Pat Hawkins is about 2 weeks into his training program. He's started with Basic Math, a subject he feels he's never been good at. His supervisor told him that Math skills will become more important as improvements to the equipment are made at work. But Pat feels that he's survived this long without math skills, why should he learn them now?

When Pat comes into the learning lab, he picks up the resources he needs, takes off his coat and wanders over to a workstation, thinking to himself, "Oh, here comes 2 hours of boredom. I'd rather be home, eating dinner with my family, or bowling with the guys."

After arranging his resources and notebooks, he decides he needs a cup of coffee. So, he goes to the coffee machine. In the dining room, a TV is on with the news. He watches the news for 10 or 15 minutes while he sips his coffee. On his way back to the learning lab, he thinks about the news events he just saw and wonders "what the world's coming to."

He goes back to his workstation, realizes he didn't bring a pen or pencil, so he goes into the office to get one. He chats for 5 minutes with one of the secretaries.

Then, he returns to the workstation and looks at his watch. A half hour has passed already. "Good," Pat thinks, "Only one and a half more hours of this." He works 2 or 3 problems. Then, he starts to think about the argument he and his wife had this morning. It's been bugging him all day. He knows he needs to talk to her again more calmly and rationally. He starts planning what he'll say to her.

Then, Pat realizes he's cold. He's only wearing a short-sleeved T-shirt. He rubs his arms and then gets up to get another cup of coffee. In the dining area, he sees one of his co-workers. They start talking about the day's events at work and how tough it is to work and go through this training at the same time. Pat glances at his watch. Only about 45 minutes left to study.

He goes back to his workstation. He reviews his notes and tries to go through the examples, but he keeps thinking about what he'll say to his wife when he gets home. He hits an example problem that makes no sense to him. After going over it a couple times, he looks at his watch. Only 15 minutes left.

Concentration Activity (cont'd)

"Well, I'm going to call it a day--this is a good stopping point," he says to himself and leaves. On his way out the door, he shakes his head and thinks, "It's going to take me forever to get through this Math class, 2 hours is hardly enough time."

What Breaks Our Concentration?

As you go over this section, give the examples listed for each category, then ask the students if they can think of others. Write these on board. Also, ask them is they can identify any of these factors as culprits in breaking Pat Hawkins' concentration. For example, ask what external factors broke Pat Hawkins' concentration? (TV, chatting with co-worker, not having pencil, etc.)

- **EXTERNAL DISTRACTIONS**

Some examples: uncomfortable chairs, lighting, noise

- **INTERNAL DISTRACTIONS**

Some examples: personal problems, daydreaming

- **PHYSICAL FACTORS**

Some examples: hunger, thirst, tiredness, illness

- **MENTAL FACTORS**

Some examples: boredom, negative attitude

Ways To Increase Concentration

There are, of course, ways to increase your concentration, and get past the physical and mental distractions that creep in:

- Keep your goal in mind.
- Develop an interest in and a positive attitude about the material.
- Eliminate or minimize distractions beforehand.
- Think about successes you've had or success you're determined to have. Then, get to work.

CONCENTRATION HINT: You can will yourself to concentrate and then practice. Start by telling yourself to concentrate for just 5 minutes. Then you can gradually increase your concentration time. Soon, concentration will become a good habit.

Concentration Activity - Good Model

Let's figure out what Pat Hawkins' study session would have been like if he applied some of these concentration techniques. Have the class come up with some things they think he could do. Then, refer them to the good model and briefly go over.

Pat Hawkins is about 2 weeks into his training program. He's started with Basic Math, a subject he feels he's never been good at. His supervisor told him that Math skills will become more important as improvements to the equipment are made at work. Even though Pat feels he's survived this long without math skills, he knows that more is going to be expected from him on the job when the new equipment is installed. He knows it's going to be a struggle, but on the way to the learning lab, he mentally prepares himself to learn and succeed at Basic Math.

Before he leaves work, Pat makes sure he has everything he needs his notebook, a pencil and eraser, a snack of crackers, cheese and fruit, and a light sweater.

Concentration Activity - Good Model (cont'd)

When he arrives at the learning lab, he takes off his coat and puts on the sweater. He takes his notebook to the dining area, eats his snack, has something to drink and goes over his notes from the last session, ignoring the news on the TV. As he walks back to the learning lab, he feels prepared. He checks out the resources he needs and goes to a workstation where he feels comfortable.

The argument that he had with his wife this morning comes into his mind. It's been bugging him all day. He tears off a piece of notebook paper and writes down what the argument was about and his solution, talk to her calmly and rationally. "I'll think about what I'm going to say in the car on the way home," he tells himself. Then, he gets down to business.

First, he reviews his notes, making sure to work through the example problems. There's one in particular that gives him some problems, so he marks it to ask the instructor about in the next class session.

Now, he's ready to tackle problems. He works through the problems in the first section of the software. Before starting the second section, though, he decides he needs a short break. He looks at his watch, about 45 minutes left, enough time for a 10-minute break.

He goes into the dining area where he sees a co-worker. He chats with him about the day's work events but lets him know that he can't talk long because he wants to finish the next section before leaving today. The co-worker comments on his motivation and persistence. "It's hard," Pat tells him, "but I look at it as an opportunity. I don't know how all this will fit together with our jobs, but I think I'll be better prepared for the new equipment if I learn this now." Pat keeps track of the time and at the end of 10 minutes, he tells his co-worker he has to go.

He returns to the workstation and works the problems in the second section of the software. Walking out of the building, Pat has a sense of confidence in his ability to learn. And when he gets in the car, as promised, he starts thinking about what to say to his wife. He feels that he'll be able to work out the situation with her, now that he let it simmer in the back of his mind for a while and came to it fresh.

Notetaking Tips

Another study skills technique that can help us get more out of this class and any learning experience is to take good notes and use them to refer back to.

The following tips are general ones, regarding notetaking:

- **Listen actively** - Good listening skills are important for taking good notes.
- **Don't try to write down every word the instructor says** - Abbreviate when possible and summarize. The most valuable notes to you are the ones in your own words.
- **Be neat and organized** - After all, what good are a bunch of messy, sloppy words that you won't be able to understand later? On the other hand, don't get too hung up on neatness. A word crossed out here or there or an arrow or two is OK, as long as it's understandable.
- **Review your notes daily** - Preferably, review them right after class. Just a quick 5-10 minute review will help you to retain the material a lot longer.

They have 2 handouts which are examples of neat, concise notetaking. Go over each one, pointing our the organized format which makes it easier to review notes as well as easier to take them, the use of abbreviations, and the use of a column that can either be filled out in class if there's time or during a quick review to ensure understanding (In Vocabulary example, it's the My Sentence column, in Using the Dictionary example, it's the Example column.) Stress the importance of putting notes into own words and checking understanding of notes by doing something like making up a vocabulary word sentence. Also, mention the layout of the handouts used in this class -- plenty of white space everywhere for notes and in some cases, even specific blanks left for notes on class discussions.

Notetaking Examples

Vocabulary Words

Word	Pronunciation	Meaning	My sentence
Variable	Vâr ē e bel	Measurable quantities such as dimensions or weight	Two variables that I need to check are the diameter and thickness of the valve tip.
Probability	prŏb e bil i tē	The chance that something will or will not happen	The probability of process problems increases when we use a new material for the first time.

Using the Dictionary

Recall Words	Notes	Examples
Spelling	Spelling - entry word shows - sometimes more than 1 sp. - more common sp. given 1st.	theater or theatre
Plurals	Plurals - most nouns show by -s or -es - irregular plurals in dict. - shown by pl. before plural form	mouse - pl. mice

Memory Improvement

Just as there are personal learning styles, there are also different types of memory. You probably use all three types but you also probably have one that's more dominant.

Three Types of Memory

- o Visual
- o Auditory
- o Kinesthetic

Do the following quick exercise so participants can get an idea of what memory type is their dominant one:

Tell them you'll say a list of 5 words. After each word, they're to write down the first word that comes into their mind that they think would help them remember that word.

The list of 5 words

Art

Work

Ship

Land

Store

If they wrote down words that are concrete visual images, such as painting for art or sail for ship, they most likely have a dominant visual memory. If they wrote down sound-alike words, such as cart for art and slip for ship, they most likely have a dominant auditory memory. If they wrote down "feeling" or "describing" words such as beautiful for art or wet for ship, they most likely have a dominant kinesthetic memory.

Memory Improvement (cont'd)

Now that we know which type of memory is our strongest, let's go over some general tips for improving memory that people with all types of memories can use.

General Tips to Improve Your Memory

o	**Interest -**	It's much easier to remember information about what interest you.
o	**Selection -**	It's a lot easier to remember the important points made, rather than to try and remember all the details given.
o	**Attention -**	You need to give your full attention to something that you want to remember.
o	**Understanding -**	If you understand something, you'll remember it a lot easier.
o	**Intention to - Remember**	You need to tell yourself that you want or need to remember something.
o	**Confidence -**	Have a positive mental set -- see yourself as a person with a good memory.
o	**Association -**	Connect things in your mind.
o	**Background of - Experience**	You'll more easily remember new things about a topic if you already know something about that topic.
o	**Organization -**	Group things you have to remember in a logical fashion.
o	**Practice -**	The more you practice, the better your memory will be.

Memory Systems Now let's take a look at some memory systems that you can use to improve your memory. You can use whichever systems you feel would work for you. You may use just one or you may use more than one.

Memory Systems

- **Observation -** The more and better you observe or study something, the easier it will be to remember.

  In other words, if you look at something for a minute or two rather than 30 seconds, you're more likely to remember it.

- **Visualizing/ Imaging -** Picturing something helps us to remember it better. Concrete items are easier to visualize than abstract ideas.

  To illustrate this, have them visualize the following 2 items:

  - A valve
  - Putting quality into your work

  Ask them which one was easier to see in their minds.

- **Association -** It's easier to remember new information when you associate it with something you already know.

  For example, you can remember how to spell piece, by remembering the first three letter spell the word pie and whenever you think of piece, think of a piece of pie. Or remembering the shape of Italy by thinking of a boot.

Memory Systems (cont'd)

o **Substitution -** Think of and picture a word or group of words that sound like or remind you of what you want to remember. This technique works well for abstract concepts.

For example, to remember Minnesota, you can think of a small bottle of soda -- a mini-soda. Or you can remember the word HOMES in order to remember the names of the Great Lakes (Huron, Ontario, Michigan, Erie, Superior) Mention that using other phrases like HOMES to remember a series of things is called mnemonics.

o **Classification -** Divide items into logical groups. It's much easier to remember three or four groups of four to six items each than one large group of twenty to twenty-five items.

For example, remembering a grocery list according to categories such as meat, dairy, produce, pasta rather than just trying to remember the whole list.

Memory Exercise

If time, have them try the following memory exercise. If there's not time, tell them to try the exercise on their own -- they'll be amazed at how well they can remember!

Use the substitution technique to memorize the ten memory principles. Each is listed below with a space next to it for you to draw a picture or write a word which will help you remember each item. After you've completed your substitutions, take a few minutes to memorize, then flip this page over and surprise yourself at how well you remember the ten memory principles.

1. Interest ____________________
2. Selection ____________________
3. Attention ____________________
4. Understanding ____________________
5. Intention to Remember ____________________
6. Confidence ____________________
7. Association ____________________
8. Background of Experience ____________________
9. Organization ____________________
10. Practice ____________________

Memory Exercise (cont'd)

Here's an example of how the memory exercise works.

1.	Interest	% percent symbol
2.	Selection	Imagine yourself selecting an object you like such as a piece of candy from an assorted box of chocolates
3.	Attention	Think of a soldier standing at attention
4.	Understanding	Picture a person under a stand
5.	Intention to Remember	Imagine a person in a tent with a light bulb over his or her head
6.	Confidence	Picture a person with their chest out
7.	Association	Imagine an association you belong to
8.	Background	Think about someone lying on their back on the ground
9.	Organization	Picture an organization chart, or an open file drawer that is organized.
10.	Practice	Imagine someone practicing on a musical instrument or practicing a sport.

ZIRCOA COMMUNICATIONS ON THE JOB I

OBJECTIVES

SESSION 3

- Identify effective communication techniques when faced with difficult job situations
- Practice effective communication techniques when faced with difficult job situation

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB I

SESSION 3

DEALING WITH DIFFICULT COMMUNICATION SITUATIONS

Many factors combine to create difficult communication situations. Can you name a few?

Personality styles.

Perceptions (different for every person).

The situation (What's going on at the moment?)

Past histories.

Emotions. Assumptions.

Others:

Brainstorm any that the participants will add.

Communication does not occur in a vacuum. Any communication situation involves people, words, emotions, attitudes, and non-verbal interactions. Can you name any other ingredients that add to the communication "stew"?

Job stresses.

Home situations.

Time constraints.

Promotions.

Instructor 3-1

Work environment (hot, cold, etc.)

HANDOUT

7 STEPS TO MANAGING CONFLICT

1. **ASK TO SPEAK WITH THE PERSON**

   Decide on a time and place that is convenient for both of you.

2. **LISTEN**

   Really listen to what the other person has to say.

   Use good listening skills.

3. **STATE THE PROBLEM**

   Use I messages to state the problem.

   Do not call names or yell.

   Describe behavior instead of making judgements about the other person.

   Include positive feedback vs. praise.

GO TO PARTICIPANT PAGE 3-2

3-2 through 3-9 should fit here. Based on individual decisions Facilitators can decide to go on to role playing after 3-9 or wait until finishing 7 Steps to Managing

COMMUNICATIONS ON THE JOB I
SESSION 3

Conflict.

FACILITATOR NOTE

Read through page 3-2 as a class. To tend to lower level readers, facilitator may need to read aloud. May want to have participants volunteer to read some of the statements, e.g. facilitator reads you-blaming and participants take turns reading I-rational approach. Some persons with previous communication training may identify the I-rational approach with the "I statements". The two formats are quite similar and the other may be reviewed if time permits.

When you describe behavior, I feel state how you are affected with feelings included. It would be helpful if provide possible change in behavior win/win.

RETURN TO MANAGING CONFLICT

4. REPEAT THE OTHER PERSON'S POINT OF VIEW

Make sure you understand what the person means.

Try to see the situation their way.

HANDOUT

7 STEPS TO MANAGING CONFLICT (cont'd)

5. NEGOTIATE

Work toward solving the problem.

This is not a win-lose situation.

ADD WIN- WIN OVERVIEW

6. REACH AN AGREEMENT

Find a solution with which you can both live.

7. FOLLOW UP

Make sure the solution is working for both of you.

Make changes if necessary.

HANDOUT

RULES FOR FIGHTING FAIR

A REVIEW OF THE ENTIRE SYSTEM AND "GOOD COMMUNICATION" STYLES.

We learn rules for driving, for sports, and games, but most of us have never learned rules for dealing with conflict. The Rules for Fighting Fair help workers deal with conflict constructively.

1. Identify the problem

2. Focus on the problem

3. Attack the **problem**, not the person

4. **Listen** with an **open mind**

5. Treat a person's feelings with respect

6. Take responsibility for your actions

COMMUNICATIONS ON THE JOB I
SESSION 3

HANDOUT

TIPS

1. Choose a good time and place for both people

2. Do not bring up the past (history)

3. Deal only with the current conflict

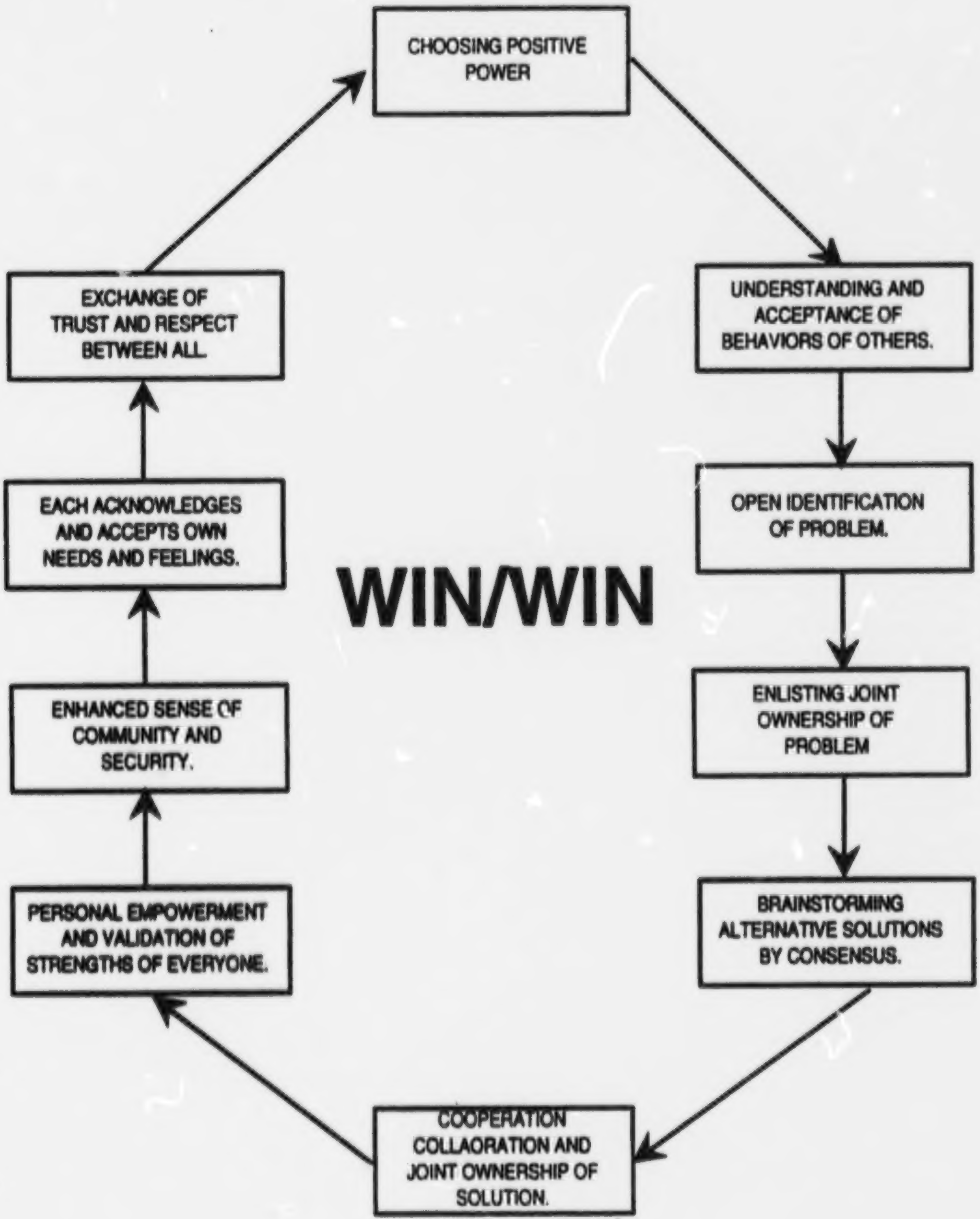
4. Avoid words like always and never

5. Try to understand your own feelings and the other person's feelings

6. Stay calm

7. Have a sense of humor

COMMUNICATIONS ON THE JOB I
SESSION 3


CHOOSING POSITIVE POWER
UNDERSTANDING AND ACCEPTANCE OF BEHAVIORS OF OTHERS.
OPEN IDENTIFICATION OF PROBLEM.
ENLISTING JOINT OWNERSHIP OF PROBLEM
BRAINSTORMING ALTERNATIVE SOLUTIONS BY CONSENSUS.
COOPERATION COLLAORATION AND JOINT OWNERSHIP OF SOLUTION.
PERSONAL EMPOWERMENT AND VALIDATION OF STRENGTHS OF EVERYONE.
ENHANCED SENSE OF COMMUNITY AND SECURITY.
EACH ACKNOWLEDGES AND ACCEPTS OWN NEEDS AND FEELINGS.
EXCHANGE OF TRUST AND RESPECT BETWEEN ALL.
WIN/WIN

OBJECTIVES

SESSION 4

- Demonstrate phonics skills
- Demonstrate ability to locate specific information in a dictionary

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB I
SESSION 4

PHONICS REVIEW

There are two kinds of letters in the English alphabet, **consonants** and **vowels**. Twenty-one of the letters in the alphabet are consonants:

b c d f g h j k l m n

p q r s t v w x y z

Five of the twenty-six letters of the English alphabet are **vowels**:

a e i o u

This phonics review will include consonant blends, silent consonants, single long vowels and single short vowels. Using phonics is necessary when you need to decode and pronounce unknown words.

THE KEY STEPS IN USING PHONICS TO DECODE AND PRONOUNCE WORDS ARE:

1. Look at the letters that make up the word very carefully.
2. Say the sounds that letters and pairs of letters stand for.
3. After you have said all the sounds of the letters, say them again while blending the sounds together so that the result is the sound of the new word.

COMMUNICATIONS ON THE JOB I

SESSION 4

CONSONANT BLENDS

Consonant blends are combinations of two or three consonants, each with a distinct sound, that go together--blend smoothly with the other(s). These consonant blends can be found in the beginning, in the middle, or at the end of a word. Each consonant in the blend keeps its own speech sound, and these sounds can be heard when you say the blend. When you say the following words, you will be able to hear the sound of each of the consonants in the underlined blend.

blue	plastic	send
grass	waste	last
drag	undress	tent

The consonant blends are easier to learn when they are put into groups. The following are some often-used groups of consonant blends. Say the words in each group and listen for the sounds of the consonant blends.

L blends all have l as the last letter of the blend.

bl cl fl gl pl sl

bl	black	blow	reblot
cl	clap	clog	unclean
fl	fly	flower	flag
gl	glass	glow	glee
pl	plate	plop	plum
sl	slice	slate	slow
spl	splash	splice	splint

PRACTICE 1

Say each of the following words. Circle each l blend you hear.

1. place
2. clock
3. sleet
4. fleet
5. glue
6. flop
7. claw
8. split
9. plot
10. bleed

COMMUNICATIONS ON THE JOB I

SESSION 4

R blends all have **r** as the last letter of the blend.

br cr dr fr gr pr tr

br	brown	brand	umbrella
cr	crab	cross	crank
dr	drag	dry	drop
fr	fry	fret	refresh
gr	green	grape	grunt
pr	prize	prank	surprise
tr	train	try	subtract

PRACTICE 2

Say each of the following words. Circle each **r** blend you hear.

1. trip
2. unfriendly
3. pretty
4. bring
5. drug
6. frank
7. cry
8. preach
9. track
10. unbreakable

COMMUNICATIONS ON THE JOB I
SESSION 4

S blends all have **s** as the beginning of the blend.

sc sk sm sn sp st sw scr spr str

Sl and spl can be l blends or **s** blends. They have been put in the l blend group.

sc	scale	scold	scum
sk	skip	skate	ask
sm	smile	smack	smoke
sn	snake	snip	unsnap
sp	spider	speak	clasp
st	still	stand	lost
sw	sweet	swim	swab
scr	scrub	scrap	unscrew
spr	spring	spray	sprout
str	string	strap	struck

PRACTICE 3

Say each of the following words. Circle each **s** blend you hear.

1. scat
2. sprinkle
3. scotch
4. screen
5. smear
6. swear
7. snoop
8. stretch
9. first
10. desk

Other often-used consonant blends are usually found at the ends of words.

nt nk nd ld

nt	hunt	want	went
nk	thank	sunk	wink
nd	found	sand	wind
ld	cold	bald	held

PRACTICE 4

Say each of the following words. Circle each consonant blend you hear.

1. bunk
2. field
3. sent
4. land
5. lint
6. hold
7. want
8. send
9. rank
10. weld

SKILL PRACTICE: CONSONANT BLENDS

Circle the consonant blends you hear in the words in each of the following groups. Some words have more than one consonant blend. Other words do not have any blends at all.

1.	grind	greet	gold
2.	trapper	tailor	trailer
3.	clearest	contest	cripple
4.	subject	swallow	splinter
5.	pretend	placement	passage
6.	chunk	grasp	blunt
7.	favor	flavor	fright
8.	slender	sorrow	strike
9.	brain	blame	bold
10.	improve	instant	insist

COMMUNICATIONS ON THE JOB I
SESSION 4

SILENT CONSONANTS

When two consonants are next to each other in a word, sometimes one of them is silent. You do not hear it at all when you say the word. The following are some examples of silent consonants. Say the words in the examples. You should not hear the underlined letters.

Two of the Same Consonant Letters

When two of the same consonant letters are next to each other, only one sound is heard.

egg	oddest	purring	bill	putt	missed

Examples of Silent Consonants

Silent b	lamb	climb	bomber	debt	doubt
Silent c	black	duck	nickel	muscle	scissors
Silent g/gh	sign	gnash	sight	high	neighbor
Silent h	ghost	honest	hour		
Silent k	knife	knit	knee		
Silent l	calf	folk	half		
Silent n	autumn	damn	hymn		
Silent p	psalm	cupboard	raspberry		
Silent s	isle	island	aisle		
Silent t	castle	often	fasten		
Silent w	wrong	write	wholly		

SKILL PRACTICE: SILENT CONSONANTS

Say each of the following words. Cross out any consonant letters you do not hear.

1. lis~~t~~en
2. thum~~b~~
3. hi~~gh~~
4. s~~c~~ent
5. sta~~l~~k
6. ~~p~~sychology
7. r~~h~~yme
8. ~~w~~reck
9. as~~s~~ig~~n~~
10. ~~k~~ni~~gh~~t

COMMUNICATIONS ON THE JOB I
SESSION 4

VOWELS

Five of the twenty-six letters of the English alphabet are vowels.

a e i o u

Sometimes the consonant letters **w** and **y** also act as vowels.

When the sound of a vowel is the same as its name, the vowel sound is said to be **long.** Say each of the following words and listen for the sound of the vowel's name. A bar (-) is used above a vowel letter to show that the letter stands for long vowel sound.

ace eve ice oh use

PRACTICE 1

Say each of the following words and listen for the name of the vowel letter. Then mark the long vowel that you hear.

bāse
Ūtah
tōte
flūte
hīgh
chōke
Pēte
hōpe
kīte
flāke
wīpe
shē
lāte
wē
chūte

COMMUNICATIONS ON THE JOB I
SESSION 4

Single Vowels at the End of Short Words

A single vowel at the end of a short word usually stands for a long vowel sound. Say the following short words and listen for the long vowel sound in each.

bē gō hī

Silent *E* at the End of a Word

When a word has a vowel, consonant, silent **e** pattern, the vowel sometimes stands for a long sound. The following words are examples of this pattern. Notice that the final **e** is silent in each word and that the first vowel has a long sound.

tāpe thēse bīte nōse rūde māde

PRACTICE 2

Say the following words. You will not hear any long vowel sounds. Then add an **e** to each word. Now mark the long vowel sound you hear in each word.

fat	hop	mad
fāte	hōpe	māde
us	ton	sum
ūse	tōne	assūme

Y AS A VOWEL

The letter **y** can act as either a consonant or vowel letter. The letter **y** found at the beginning of a word stands for the consonant sound in **yet**. When the letter **y** is found in the middle or at the end of a word, it stands for a vowel sound.

Short *I* Sound of *Y*

When the letter **y** is in the middle of a word, it usually stands for a short **I** sound. Listen for the short **I** sound. Listen for the short **I** sound of **y** in the following words.

gym hymn oxygen

Long *I* Sound of *Y*

As the last sound of a short word, the letter **y** usually stands for the long **I** sound heard in the following words.

dry fry my

Long *E* Sound of *Y*

When the letter **y** is the last letter in a word that has more than one part, it usually stands for a long **e** sound. Listen for the long **e** sound at the end of each of the following words.

baby candy happy

COMMUNICATIONS ON THE JOB I
SESSION 4

SKILL PRACTICE: VOWELS

Say the following words and listen for the sound of each vowel. Write the letter that stands for the sound you hear and mark it as long or short.

1.	fly	ī	11.	branch	ă
2.	cute	ū	12.	verse	ĕ
3.	me	ē	13.	like	ī
4.	floppy	ă ē	14.	shaky	ā, ē
5.	gyp	ĭ	15.	home	ō
6.	type	ī	16.	hike	ī
7.	warm	ă	17.	burn	ŭ
8.	pitch	ĭ	18.	kit	ĭ
9.	place	ā	19.	fret	ĕ
10.	lumpy	u ē	20.	lurch	ŭ

DOUBLE VOWELS--ONE VOWEL IS SILENT

When two vowels are next to each other in a word, they usually act as if they were only one vowel. Some double vowels stand for the sound of only one vowel--the other is silent. The following double vowels act as though they were single vowels. The first vowel stands for the sound you hear. The second vowel is silent.

Sounds of *AI* and *AY*

The double vowels **ai** and **ay** usually stand for only one sound, long **a**. The **i** and **y** are silent. Say the following words and listen for the sound of long **a**.

aid
main
laid
tray
waist
clay
stain
pray
wait

Sounds of *AI* and *AY*

The double vowels **ea** sometimes stands for a long **e** sound. The **a** is silent. Say the following words and listen for the long **e** sound.

clean
sea
please
treat
weak
grease

The double vowel **ea** may also stand for a short **e** sound. The **a** is still silent. Say the following words and listen for the short **e** sound.

bread
death
wealth
deaf
breast
dead

COMMUNICATIONS ON THE JOB I
SESSION 4

Sound of *EE*

The double **ee** usually stands for the single long **e** sound. Say the following words and listen for the long **e** sound.

week
peep
eel
Greek
queen
teen

Sound of *OA*

The double vowel **oa** usually stands for the long **o** sound. The **a** is silent. Listen for the long **o** sound as you say the following words.

soap
coal
cloak
foam
boat
oak

COMMUNICATIONS ON THE JOB I
SESSION 4

DOUBLE VOWELS–NEW SINGLE SOUNDS

Some double vowels stand for a single sound that is different from that of either vowel when it stands alone.

Sounds of *AU* and *AW*

Both **au** and **aw** stand for the new single vowel sound you hear in the following words.

cause awe fault
squaw haul saw

Note that the **w** acts as a vowel when it follows the **a** in these words.

Sounds of *OI* and *OY*

Double vowels **oi** and **oy** stand for the new single vowel sound you hear in the following words.

boy coin toy
voice joy spoil

Note that **y** acts as a vowel when it is part of the double vowel **oy**.

PRACTICE 3

Say each of the following words. If you can hear the sound of **aw** (shawl), write an **a** next to the word. If you hear the sound of **oy** (joy), write a **b** next to the word.

1. enjoy b
2. rejoice b
3. caught a
4. lawn a
5. coil b
6. auto a
7. crawl a
8. noise b
9. Paul a
10. destroy b

COMMUNICATIONS ON THE JOB I
SESSION 4

DOUBLE VOWELS THAT STAND FOR MORE THAN ONE SINGLE SOUND

Sounds of *OW*

The double vowel **ow** may stand for a long **o** sound. In this case, the **w** is silent. Say the following words and listen for a long **o** sound in each.

blow own tow
grow snow glow

Sometimes the **ow** may stand for the sound heard in the following words.

how brown cow
owl crowd howl

PRACTICE 4

Say each of the following words and listen for the two sounds of **ow**. If the word has an **ow** sound as in snow, write an **a** next to the word. If the word has the **ow** sound as in how, write a **b** next to the word.

1. power b
2. brown b
3. flow a
4. growling b
5. flower b
6. now b
7. town b
8. show a
9. prowl b
10. slow a

COMMUNICATIONS ON THE JOB I
SESSION 4

Sounds of *OU*

The double vowel **ou** usually stands for the same **ow** sound you hear in owl.

blouse flour our
out ground scout

The double vowel **ou** may also stand for three other sounds. In the following words, the double vowel **ou** stands for the long **o** sound. The **u** is silent. Listen for the long **o** sound in each word.

dough soul though
owl crowd howl

The double vowel **ou** may also stand for a short **u** sound. Then the **o** is silent. Listen for the short **u** sound in the following words.

cousin double tough

Finally, **ou** may stand for a long **u** sound. In the following words, the **o** is again silent. Say the words and listen for the long **u** sound.

group route soup

COMMUNICATIONS ON THE JOB I
SESSION 4

PRACTICE 5

Say the following words and listen for the sounds of **ou**. Write **a**, **b** or **c** to show which sound of **ou** you hear.

a = sound in out
b = sound in double (u)
c = sound in group (u)

1. country b
2. youth c
3. count a
4. house a
5. enough b
6. cougar c
7. ounce a
8. rough b
9. trouble b
10. coupon c

COMMUNICATIONS ON THE JOB I

SESSION 4

Sounds of *OO*

The double **oo** may stand for two different sounds. One **oo** sound is heard in the following words. It is called the long **oo** sound (oo). Listen for the long **oo** sound as you say the following words.

room
snoop
mood
too
noon
food

The other **oo** sound is heard in the following words. It is called the short **oo** sound (oo). Say the following words and listen for the short **oo** sound.

foot
book
hood
stood
crook
soot

PRACTICE 6

Listen to the **oo** sound in each of the following words. Mark the **oo** sound as long (boot) or short (hood) in each word.

1. zo͞o
2. bro͝ok
3. sho͝ok
4. blo͞om
5. no͞ose
6. ho͝od
7. gro͞om
8. wo͝ol
9. pro͞of
10. ro͞oster

COMMUNICATIONS ON THE JOB I
SESSION 4

USING PHONICS TO DECODE AND PRONOUNCE WORDS

You have learned sounds that letters of the English alphabet usually stand for. You are now ready to use these sounds to decode and pronounce words. This practice will help you learn to use phonics whenever you need to decode and pronounce words.

REMEMBER - THE KEY STEPS IN USING PHONICS TO DECODE AND PRONOUNCE WORDS ARE:

1. **LOOK AT THE LETTERS THAT MAKE UP THE WORD VERY CAREFULLY.** Use what you know about consonant blends and double vowels to help you spot letters that go together.

2. **SAY THE SOUNDS THAT LETTERS AND PAIRS OF LETTERS STAND FOR.** Be careful not to say silent letters.

3. **AFTER YOU HAVE SAID ALL THE SOUNDS OF THE LETTERS, SAY THEM AGAIN WHILE BLENDING THE SOUNDS TOGETHER SO THAT THE RESULT IS THE SOUND OF THE NEW WORD.**

Word: **skoaph**

sk = blend--go together

oa = o

ph = f sound

sk + o + f

Pronounced: **skof**

Word: **sproad**

spr = blend--go together

oa = double vowel = o

d = consonant sound

spr + o + d

Pronounced: **sprod**

COMMUNICATIONS ON THE JOB I
SESSION 4

SKILL PRACTICE: USING PHONICS TO DECODE AND PRONOUNCE WORDS

Directions: Use what you know about letters and their sounds. Say each word. Then write its correct English spelling. These are real words.

Example: terckee = turkey; cou = cow.

1. psope soap
2. wramb ram
3. kwik quick
4. phite fight
5. shigh shy
6. cyk sick
7. phlag flag
8. cou cow
9. wrabit rabbit
10. doun down

INSTRUCTOR OUTLINE

Participants have numbered statements and blank space for notes

1. **Keep a dictionary within easy reach**

DISCUSSION

Tom Peters the management guru recognized the importance of this factor in a speech. He said that he had One of those beautiful big dictionaries that never got pulled off the shelf to use. He placed it on a stand in a prominent place and claims that if you can't help tripping over it you'll use it. Can you remember seeing one of those amazingly big dictionaries in a library from your childhood or even now? Don't they get used because of their accessibility?

2. Practice alphabetical order

DISCUSSION

All dictionaries are arranged in alphabetical order. Imagine trying to find a word in a 500,00 word dictionary with a simple system of order. So working quickly with the alphabet makes dictionary use easier. If you have to say the entire alphabet to find a particular letter, this will slow you down too much. Dividing the alphabet into sections can help. Then grouping the letters can lead to the approximate area of the dictionary in which to start the word search.

Two ways that

If the word begins with b, look toward the front
If the word begins with m, look toward the middle
If the word begins with s, look toward the back of the dictionary

Another method groups the letters of the alphabet into sections:

1. **A B C D E F G**
2. **H I J K**
3. **L M N O P**
4. **Q R S T U V**
5. **W X Y Z**

Now practice picturing these sections in your mind. The next time you need to look something up in the dictionary, the phone book, the glossary of a manual, or a street name on a map.

COMMUNICATIONS ON THE JOB I
SESSION 4

Putting words in alphabetical order

DISCUSSION

Keep the alphabet and the techniques above in mind when alphabetizing words, names etc. Practice with putting words in order helps when finding a word quickly.

If words all begin with the same letter then the second letter determines the alphabetical order.

Circle the letter on the "g" word list that determines how these words were ordered:

galley

girl

girth

generation

gold

golden

gum

Words can share the same first, second and possibly third letters. It then becomes **the first letter that is different** that determines the alphabetical order.

Activity 1 will give some hints, techniques and practice with alphabetization. Some people seem to have an easier time with this. It is a skill that can be reviewed and improved.

3. Use a dictionary with ease

DISCUSSION

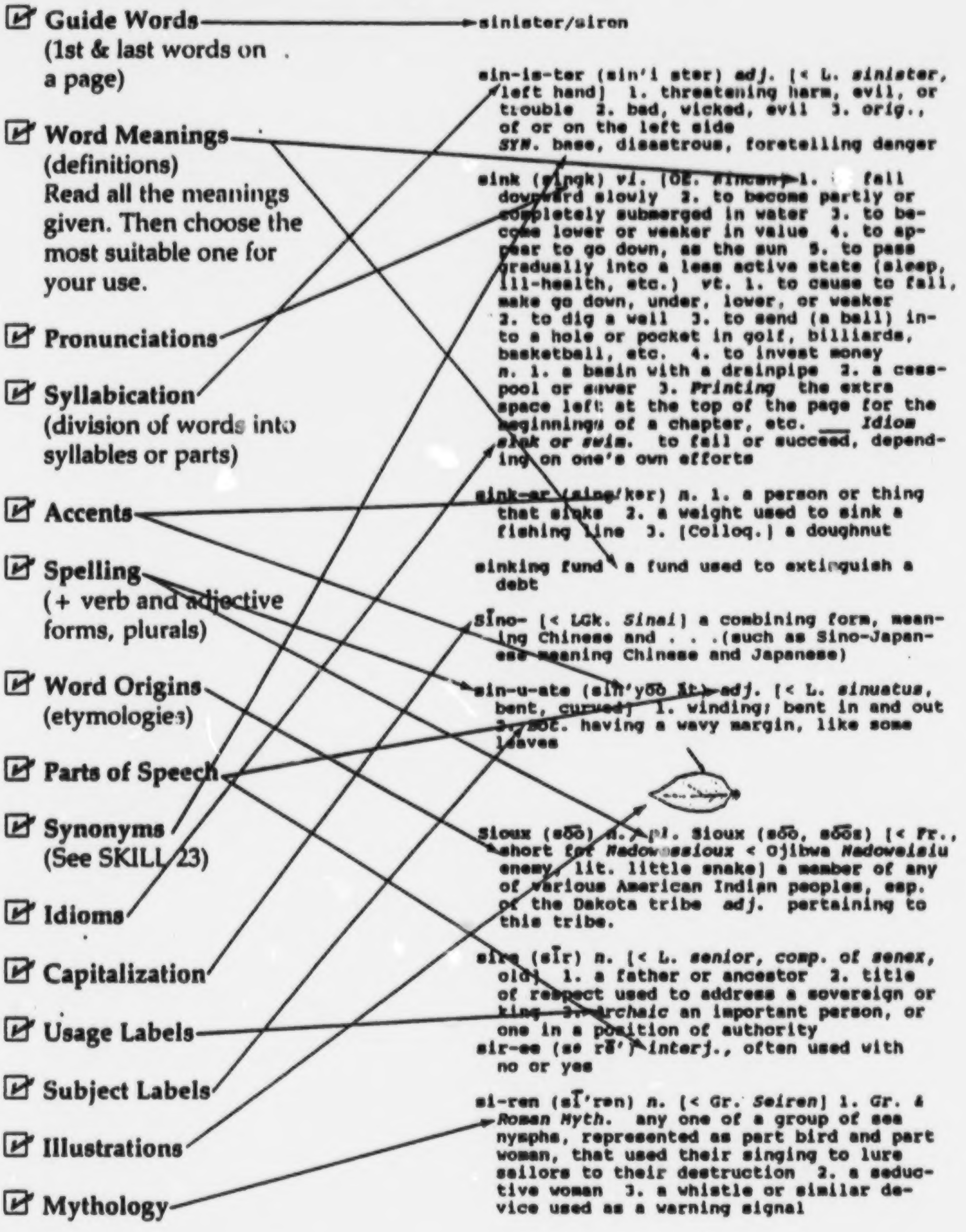
Review the components of a dictionary page

3. Use a dictionary with ease:

SKILL 16: POWERHOUSE, POWER TOOL

The Dictionary

15 Ways a Dictionary Can *Energize* Your Reading



- 🗹 **Guide Words** (1st & last words on a page)
- 🗹 **Word Meanings** (definitions) Read all the meanings given. Then choose the most suitable one for your use.
- 🗹 **Pronunciations**
- 🗹 **Syllabication** (division of words into syllables or parts)
- 🗹 **Accents**
- 🗹 **Spelling** (+ verb and adjective forms, plurals)
- 🗹 **Word Origins** (etymologies)
- 🗹 **Parts of Speech**
- 🗹 **Synonyms** (See SKILL 23)
- 🗹 **Idioms**
- 🗹 **Capitalization**
- 🗹 **Usage Labels**
- 🗹 **Subject Labels**
- 🗹 **Illustrations**
- 🗹 **Mythology**

sinister/siren

sin-is-ter (sin'i ster) *adj.* [< L. *sinister,* left hand] 1. threatening harm, evil, or trouble 2. bad, wicked, evil 3. *orig.,* of or on the left side *SYN.* base, disastrous, foretelling danger

sink (singk) *vi.* [OE. *sincan*] 1. to fall downward slowly 2. to become partly or completely submerged in water 3. to become lower or weaker in value 4. to appear to go down, as the sun 5. to pass gradually into a less active state (sleep, ill-health, etc.) *vt.* 1. to cause to fall, make go down, under, lower, or weaker 2. to dig a well 3. to send (a ball) into a hole or pocket in golf, billiards, basketball, etc. 4. to invest money *n.* 1. a basin with a drainpipe 2. a cesspool or sewer 3. *Printing* the extra space left at the top of the page for the beginnings of a chapter, etc. ___ *Idiom* *sink or swim.* to fail or succeed, depending on one's own efforts

sink-er (sing'ker) *n.* 1. a person or thing that sinks 2. a weight used to sink a fishing line 3. [Colloq.] a doughnut

sinking fund a fund used to extinguish a debt

Sīno- [< LGk. *Sinai*] a combining form, meaning Chinese and . . .(such as Sino-Japanese meaning Chinese and Japanese)

sin-u-ate (sin'yo͞o it) *adj.* [< L. *sinuatus,* bent, curved] 1. winding; bent in and out 2. *Bot.* having a wavy margin, like some leaves

Sioux (so͞o) *n.*, *pl.* Sioux (so͞o, so͞oz) [< *Fr.,* short for *Nadowessioux* < Ojibwa *Nadoweisiu* enemy, lit. little snake] a member of any of various American Indian peoples, esp. of the Dakota tribe *adj.* pertaining to this tribe.

sire (sīr) *n.* [< *L. senior,* comp. of *senex,* old] 1. a father or ancestor 2. title of respect used to address a sovereign or king 3. *Archaic* an important person, or one in a position of authority

sir-ee (se rē') *interj.,* often used with no or yes

si-ren (sī'ren) *n.* [< Gr. *Seiren*] 1. *Gr. & Roman Myth.* any one of a group of sea nymphs, represented as part bird and part woman, that used their singing to lure sailors to their destruction 2. a seductive woman 3. a whistle or similar device used as a warning signal

Copyright © 1991 by Crisp Publications, Inc.
Printed in the United States of America

4. **Choose the right dictionary for the task**

DISCUSSION

Pocket dictionaries

Desk Dictionaries

Picture Dictionaries

Collegiate Dictionaries

Technical Dictionaries

COMMUNICATIONS ON THE JOB I
SESSION 4

ACTIVITY 1

Alphabetize a set of Zircoa Employees Daily Production Reports.

HINT: Separate (and alphabetize) these names in groups then rearrange them in alphabetical order.

Example:
- Names beginning with " Robb"
- Names beginning with " Robert"
- Names beginning with " Robi"
- Names beginning with "Rod" and so on...

OBJECTIVES

SESSION 5

- Identify situations in which a technical dictionary is needed
- Demonstrate skills for using a technical dictionary
- Identify components of the reading process

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB I
SESSION 5

THE READING PROCESS

HANDOUT

Have participants start the Module with the " Reading Fact Quiz"

Participants have blanks for notetaking!

FOUR AREAS OF READING

Vocabulary

Define

What does that popular radio sales pitch for a Vocabulary improvement system claim " the words you use say a lot about you"?

This may be a pitch to sell you something, but your vocabulary is important to your life and job. Just imagine if your vocabulary did not include the word KILN or TICKET or SENSOR ? Perhaps these words mean different things since starting to work at Zircoa. Different jobs, industries, cultures, and companies have different vocabularies. This course will encourage the participants to focus on their job-related vocabulary, but systems developed will most probably impact the participants everyday vocabulary. While many " vocabulary building systems" exist, this course will not present any one system. Participants will be encouraged to build their vocabulary within the lessons and individual systems that may emerge could be encouraged.

Vocabulary can be improved!

Comprehension

Define

Comprehension is part of the reading process. Reading is a mental process and because it can not be seen it is difficult to describe. Therefore we try to describe the skill that make up reading. Comprehension is another one of the skills of "good reading " that can be improved. Participants will also work on their comprehension.

Speed

Define

The rates at which people read differ greatly. Do any native Clevelanders remember Dorothy Fuldheim? As a Broadcaster she interviewed many famous people and frequently talked about the fact that she often read several lengthy books in one day. There are probably other people who we have observed to be "speed readers." There are many programs people can use if they choose to increase their reading speed. Although speed will not be a focus in this course, it will be important for participants to learn about the different speeds of reading and when each one is most applicable.

Speed can be improved and modified to fit the purpose of our reading

Concentration

Define

Concentration is another component of the mental process of as the definition states reading. Internal and external stimuli affect concentration.

HANDOUT

ACTIVITY 1 - encouraging participants to review their reading strengths first and then their weaknesses.

COMMUNICATIONS ON THE JOB I
SESSION 5

ACTIVITY 1

READING SKILL INVENTORY

Consider the three areas of reading we have discussed:

COMPREHENSION SPEED CONCENTRATION

Which is the area in which you have the most strength?

____

____

The most important area of my reading that I feel needs improving is:

____

____

The area of my reading that I would most like to improve is:

____

____

This course will give participants an overview of strategies to improve these skills especially on the job. Many different courses exist to focus on improving your reading skills. Write down a goal for improving your reading in the near future.

____

____

READING SKILLS

For participants to improve their reading skills they it is helpful for them to:

- Acknowledge that your ability to read efficiently is important to their job and their company.

  Some people, who believe that they don't "read" on the job, just need help exploring other facets of reading that they may not acknowledge (e.g. skimming, scanning, Process Documents that they read a long time ago etc. May need to BRAINSTORM these).

- A positive attitude- Develop a positive attitude for learning how to read.
- Set personal goals for improving your reading as in the Activity.

DIFFERENT READING RATES

- **SLOW STUDY** for difficult communications, following instructions or mastering information.
- **NORMAL READING** for magazine and newspaper articles, business reports, memos and fiction.
- **SKIMMING** for grasping the main ideas and for some fiction.
- **SCANNING** for looking up phone numbers, stock quotations and information on charts and forms

STAGES OF READING

LEARNING TO READ

Stage 1	Focus on identifying and perceiving sounds, letters, and words.
Stage 2	Focus on perceiving groups of words and their meanings.

READING TO LEARN

Stage 3	Focus on extracting meaning from paragraphs and longer selections.

Use instructor text, on next pages, as guidance for presenting the following section

" GOOD " READING HABITS

- Concentration
  - Controlling external stimuli
  - Controlling internal stimuli
- Setting a Purpose
- Setting a Context
  - Physical Context
  - Mental Context

Have participants retake the "quiz" and see if the information in this unit helped them change fallacies to a new understanding of the reading process.

FALLACIES ABOUT READING

BECOME

FACTS ABOUT READING

Discuss responses and where these fallacies come from. Did the information in this session help turn these fallacies into facts?

Reading is learned only at an early age?	T	F
All material should be read in the same way?	T	F
A person has to read every word to be "GOOD" reader?	T	F

JOB RELATED VOCABULARY IMPROVEMENT

Building job related vocabulary starts with words that you already know. Words and terms used on the job may look like words you use outside of work everyday.

That's important to remember. Start by thinking of the definition that you have used outside of the job. Then think of the way you have either read or seen the word at work. This will also give you a clue to it's job related meaning.

Use your new and tuned up dictionary skills. You probably have a "regular" dictionary on hand. Look the word up there. Review the definitions given. Separate the everyday uses from any that may be close to your job related use of this word. You need to be creative in finding the way the definitions fit. This dictionary may not reveal a definition that is job related. That will tell you that your word has a special technical meaning.

This dictionary may not reveal the job related definition of your word. You now need to find a new source for definitions. Let's take a look at some possibilities. Could you find a Technical Dictionary? Would a manual with a glossary help? What about asking a "seasoned" co-worker? Take a few moments to discuss these methods with the class. Rank them in the order that the class thinks would help find the most correct definition.

1. ______________________________

2. ______________________________

3. ______________________________

Discuss what is good and bad about each method:

____

____

____

OVERVIEW OF JOB VOCABULARY WORD SEARCH

Steps in review:

1. Think of "regular" use
2. Look up the "regular" definition
3. Find:
    - a. job related dictionary
    - b. manual with glossary
    - c. co-worker with the definition

CLASS ACTIVITY

Do Steps 1 & 2 and write down definitions for the following words. Use the space below.

Plant 1 ______________________________

2 ______________________________

Kiln 1 ______________________________

2 ______________________________

Jam 1 ______________________________

2 ______________________________

Mean 1 ______________________________

2 ______________________________

You will continue on to the next steps with your assignment! GOOD LUCK!!

APPENDIX A

FACILITATOR MATERIAL ON GOOD READING HABITS

COMMUNICATIONS ON THE JOB I
SESSION 5

➢ GOOD READING HABITS

If we wish to change patterns of behavior in order to improve performance, we must substitute good habits for bad ones. This need to eliminate bad habits is felt keenly by those of us who attempt to develop efficient reading skills. Understanding what constitutes good reading habits is probably the best way to begin eliminating bad habits.

➢ CONCENTRATING

Concentration can be defined as "the direction of attention to a single object," or simply stated as "paying attention." For the purpose of efficient reading, we define it as "focusing our full attention to the task at hand—reading."

Though not the first step, it is the most important prerequisite to efficient reading. No one can possibly read well without concentrating well. Not being able to concentrate makes it impossible to implement other principles and practices necessary to efficient reading. Probably the first step to improving concentration is eliminating the causes of poor concentration.

External stimuli can interfere with your ability to concentrate on almost any task, in almost any situation. Most harmful to concentration are external and internal distractions and a lack of purpose. They may be subtle distractions such as the warm sun beaming through the window or the distant sound of the TV. Or they may be quite obvious ones such as loud noises, an extremely uncomfortable (or too comfortable) chair, or poor lighting. These external distractions compete for our attention, and once they get it, they also grab our concentration. Fortunately, these distractions can be handled easily: we exclude them—move away from the window, find a better light, and so on.

On the other hand, internal distractions cannot be handled quite so easily. These distractions come from within us; we generate them. They range from not feeling well to worrying to daydreaming. Depending on how intense they are, it may be possible (or impossible) to attend to them. Experiencing a severe pain may make it impossible to pay attention. However, daydreaming about our vacation certainly can be overcome, first by recognizing it and then by refusing to continue it. One way to overcome either type of distraction is to have a purpose for reading.

Not having a purpose quickly erodes our attention and, thus, concentration. It is purpose that helps to focus our attention and lack of purpose that encourages all those distractions to bother us. Pick up a book with no purpose in mind; then sit in the warm sun. Do you attend to reading?

An incentive to improving concentration is exploring the results of poor concentration. We already know that we end up giving in to all sorts of distractions. But it fosters other undesirable habits as well, such as regression or rereading. We end up reading four lines, rereading two, reading the next six, and then rereading three of these. We call this the "two steps forward and one step backward" method. Such reading both distorts comprehension and certainly slows us down. Also, a lack of concentration ensures that words remain words and never become thoughts or ideas. And only by finding thoughts and ideas in text do we extract meaning.

What can we do to develop the habit of good concentration? First, we must realize that it is an individual effort and one that we really wish to accomplish. We must, in a phrase, make up our minds to use our minds. We accomplish this by giving the selection we are reading our undivided attention. Also, we must realize we cannot exclude all "distractions," but we can control many. We can choose places to read with the fewest distractions and interruptions. We can try to do our reading at peak periods of attention. Knowing we are tired or worried should alert us immediately to the possibility of attention problems. And, most important, we need to focus our attention actively by setting a goal or a purpose that we know we can accomplish.

➢ SETTING A PURPOSE

After discussing concentration, we realize that another important reading habit to develop is that of setting a purpose. We must decide why we are reading before we can give focus and attention to our efforts. A purpose need not be very noble, though it can be. We read while we wait; we read for pleasure; we read to process important information; or we read because we must. Whatever the case, these all represent purposes for reading.

In Chapter 5, we will explore setting a purpose at greater length. Now it is just important to realize that you need to have some purpose in mind as you read.

➢ SETTING A CONTEXT

No activity takes place in a vacuum. Reading is no exception. Reading occurs within both a physical and mental context. We are the ones who determine this context. In discussing concentration, we mentioned choosing a physical environment as free from physical distractions as possible. Other physical aspects have a bearing on reading activity. It is important to hold the book upright (not flat) at a distance from our eyes that is most comfortable—usually about fourteen inches. The lighting should allow us to see clearly and comfortably.

Other physical activities can create a less than desirable reading context. These are conflicting activities such as chewing gum (we'll end up reading at the same rate as we chew), moving our lips or vocalizing (this takes more time and fosters word-by-word reading), and even following along the printed line with our finger or a marker. The latter invites us to focus on each and every word. We should avoid any physical activity that interferes with the mental activity of reading.

Also, we need to set the proper mental context for reading, which means approaching a reading situation with a certain seriousness of mind. It does not matter whether we read to be entertained or to gain information—we must be serious if we are to accomplish our purpose. This holds especially true for taking this course. Setting the proper context also means being ready to read. We may have the most ideal physical surroundings and the best articulated purposes, but if we are not ready to read, then our efforts will be useless. If we can't get our minds off that vacation or we know the phone is going to ring, then we are probably not ready to read. Trying to read under such circumstances can be both frustrating and unrewarding. For maximum efficiency in reading, we need to "be here now."

Developing the above three reading habits—concentrating, setting a purpose, and setting a context—is a prerequisite for efficient reading. However, these habits can do more than make us efficient readers; good habits can make reading one of the most pleasurable of activities. In addition, we can derive real satisfaction from doing a task well.

OBJECTIVES

SESSION 6

- Demonstrate reading skills of recalling factual information, identifying main topics, and ideas with job-related documents
- Practice job-related Vocabulary Improvement

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB I
SESSION 6

READING FOR MEANING - RECALLING FACTUAL INFORMATION

ACTIVITY 1 CONCENTRATION, PURPOSE, CONTEXT ACTIVITY

TECHNICAL READING

Participants have blanks to fill.

The **Purpose (1)** of technical reading?
Brainstorm: To do the job; to learn about the job; to learn new information; to improve skills; because someone tells you to; curiosity.
Any others?

Technical reading requires more **Concentration (2)** .

Where do we do technical reading? Need quiet?
Interruptions?
Setting a **Purpose (3)** for technical reading.

Does understanding the reason or need for the reading make it easier? Does the reader's agreement with the need for technical reading make a difference (want to vs. have to) ?

Setting a **Context (4)** for technical reading.

Explore the hands-on context of technical reading. Example: Reading the manual with the machine in front of you to touch that control or visualize it's placement etc. Brainstorm other contexts.

How do these aspects of technical reading compared to the previous discussion of these factors?

ACTIVITY 2 Inventory Types of materials read on the job and their purposes.

COMMUNICATIONS ON THE JOB I
SESSION 6

PREVIEWING

Different reading skills have been discussed in this program. One technique that will help with recalling facts is previewing. It is easily learned and very helpful. It helps the reader become familiar with material before actually reading it. Technical reading can especially be tackled more easily with this method.

Previewing is like seeing beforehand.

Previewing before reading is like consulting a map before taking a long trip.

Previewing gives us:

* a fast impression
* a quick survey
* a concise overview

Why Preview?

* to identify topic and thoughts
* to see how the material is organized
* to make it easier to pick out details when we read
* to focus our thoughts so we can concentrate on the material better

COMMUNICATIONS ON THE JOB I
SESSION 6

HOW TO PREVIEW

* Articles

Read title
Read headings if there are any.
Read first several paragraphs.
Quickly read the first sentence of each of the remaining paragraphs
Read final few paragraphs.

ACTIVITY 3 **SPC ARTICLE**

HANDOUT

* Chapters

Read title
Read headings and sub headings
Look for and read
Objectives
Introduction
Summary

ACTIVITY 4 **INTERACTIVE COURSEWARE BOOKS**

* Manuals

Skim preface or introductory section
Look over Table of Contents

ACTIVITY 5 **ZIRCOA MANUAL**

TECHNICAL VOCABULARY

These sheets will help participants find the assignment set of words from last session. These are pages from a technical dictionary. See if they provide participants with additional information for Step 3 in your Word Search System.

J

J *(Elec.Eng.)*. The symbol *j* is used by electrical engineers in place of the mathematician's *i*. Its main use is that in circuits carrying sinusoidal current of angular frequency ω, any inductance *L* and any capacitance *C* can be replaced by reactances $j\omega L$ and

$$\frac{1}{j\omega C}$$

respectively and Ohm's law can then be used. Also referred to as the *90°* operator.

J *(Chem.)*. In names of dyestuffs, a symbol for yellow.

J *(Phys.)*. Symbol for joule, the unit of energy, work, quantity of heat.

J *(Eng.)*. Symbol for polar moment of inertia.

J *(Phys.)*. Symbol for (1) electric current density, (2) magnetic polarization.

jacaranda *(For.)*. See **rosewood**.

jacinth *(Min.)*. See **hyacinth**.

jack *(Eng.)*. A portable lifting machine for raising heavy weights through a short distance, consisting either of a screw raised by a nut rotated by hand gear and a long lever, or a small hydraulic ram. See **hydraulic-**.

jack *(Telecomm.)*. Socket whose connections are short-circuited until a jack plug is inserted. A *break-jack* is one which breaks the normal circuit on inserting plug, while *branch jack* is one which does not.

jack arch *(Build.)*. A flat arch.

jackbit *(Min.Ext.)*. Detachable cutting end fitted to shank of miner's rock drill, used to drill short blast-holes. Also called *rip-bit*.

jackblock *(Build.)*. A method of system building in which the roof and floor slabs are cast on top of each other and hydraulically jacked up to their respective levels, walls being built as and when required.

jack box *(Elec.Eng.)*. One containing switches or connections for changing circuits.

jacket *(Eng.)*. An outer casing or cover constructed round a cylinder or pipe, the space being filled with a fluid for either cooling or heating the contents, or with insulating material for keeping the contents at substantially constant temperature, e.g. the water *jackets* of an I.C. engine.

jacket *(Nuc.Eng.)*. See **can**.

jacket *(Print.)*. The wrapper, or dust cover, in which a book is enclosed. Bookjackets are usually artistically designed, and executed in colour, as their purpose is to enhance the appeal of the volume as well as to protect it from dust.

jackhammer *(Min.Ext.)*. A hand-held compressed-air hammer drill for rock-drilling.

jack plane *(Build.)*. A bench plane about 16 in long, used for bringing the work down to approximate size, prior to finishing with a trying or smoothing plane.

jack rafter *(Build.)*. A short rafter connecting a hip-rafter and the eaves, or a valley-rafter and the ridge.

jack shaft *(Elec.Eng.)*. An intermediate shaft used in locomotives having collective drive; the jack shaft is geared to the motor shaft and carries cranks which drive the coupling rods on the driving wheels.

Jacksonian epilepsy *(Med.)*. A convulsion of a limited group of muscles spreading gradually from one group to the other, usually without loss of consciousness; the result of a lesion (e.g. tumour) of the brain.

Jacobian *(Maths.)*. Of *n* functions u_i each of *n* variables x_j, the determinant whose *i,j*th element is $\frac{\partial u_i}{\partial x_j}$. Written

$\partial(u_1, u_2, u_3 \ldots u_n)$

Jacobian elliptic functions *(Maths.)*. See **elliptic functions**.

jacobsite *(Min.)*. An oxide of manganese and iron, often with considerable replacement of manganese by magnesium; crystallizes in the cubic system (usually in the form of distorted octahedra). A spinel.

jacob's ladder *(Eng.)*. Vertical belt conveyor with cups or buckets.

Jacobson's glands *(Zool.)*. In some Vertebrates, nasal glands the secretion of which moistens the olfactory epithelium.

Jacobson's organ *(Zool.)*. In some Vertebrates, an accessory olfactory organ developed in connection with the roof of the mouth.

jacot tool *(Horol.)*. A tool used by watchmakers for polishing and burnishing pivots.

jacquard *(Textiles)*. A device, frequently incorporating punched cards or punched continuous strip, used to produce patterned fabrics during weaving, warp-knitting, weft-knitting and lace making. Named after the French inventor, Joseph-Marie Jacquard, 1752-1834.

Jacquet's method *(Eng.)*. Final polishing of metal surfaces by electrolysis.

jactitation *(Med.)*. Restless tossing of a patient severely ill; a twitching or convulsion of muscle or of a limb.

jacupirangite *(Geol.)*. A nepheline-bearing pyroxenite consisting of titanaugite, biotite, iron ores, and nepheline, the last being subordinate to the mafic minerals.

jade *(Min.)*. A general term loosely used to include various mineral substances of tough texture and green colour used for ornamental purposes. It properly embraces **nephrite** and **jadeite** but is sometimes misapplied to green varieties of minerals such as **amazonstone**, **bowenite**, **hydrogrossular**, **quartz** and **vesuvianite**.

jadeite *(Min.)*. A monoclinic member of the pyroxene group; sodium aluminium silicate. Usually white, grey or mauve, it occurs only in metamorphic rocks, and is the rare form of jade (*Chinese Jade*).

jad, jud *(Min.Ext.)*. Deep groove cut into bed to detach block of natural stone. To undercut. A *jadder* is a stonecutter and his working tool is a *jadding pick*.

jag-bolt *(Eng.)*. See **rag-bolt**.

jail fever *(Med.)*. See **typhus**.

jalousies *(Build.)*. Hanging or sliding wooden sun-shutters giving external protection to a window, and allowing for ventilation through louvres or holes cut in the shutters themselves. Also called *Venetian shutters*.

jamaicin *(Chem.)*. See **berberine**.

jamb *(Build.)*. The side of an aperture.

jamb linings *(Build.)*. The panelling at the sides of a window recess, running from the floor to the level of the window head. Cf. **elbow linings**.

jamb post *(Build.)*. An upright member on one side of a doorway opening.

jamb stone *(Build.)*. A stone forming one of the upright sides of an aperture in a wall.

James-Lange theory of emotions *(Behav.)*. A theory that emotion is the subjective experience of one's own bodily reactions in the presence of certain arousing stimuli; the stimuli cause certain physiological responses, and the awareness of these responses causes emotion.

jamesonite *(Min.)*. See **feather ore**.

Jamin interferometer *(Phys.)*. A form of interferometer in which two interfering beams of light pursue parallel paths a few centimetres apart. The instrument is used to measure the refractive index of a gas, by observing the fringe shift when one of the light beams traverses a tube filled with the gas, while the other traverses a vacuum.

BEST COPY AVAILABLE

[illegible] on one carrier by transmission on or near the same frequency, with wobble or noise modulation.

JANET *(Comp.)*. *Joint Academic NETwork*. Dating back to the 1970's, it links universities and research institutions in UK.

jansky *(Astron.)*. A unit in radio astronomy to measure the power received at the telescope from a cosmic radio source. 1 jansky (Jy) = 10^{-26} W m^{-2} Hz^{-1} sr^{-1}.

J-antenna *(Telecomm.)*. Half-wave antenna fed and matched at the end by a quarter-wavelength line.

Janus *(Astron.)*. The tenth natural satellite of Saturn, discovered in 1980.

Janus *(Telecomm.)*. Transmitting or receiving antenna which can be switched between opposite directions. Used for airborne Doppler navigation systems.

japan *(Build.)*. A black, glossy, paint based on asphaltum and drying oils. Also *black japan*.

japan camphor *(Chem.)*. See **camphor**.

Japanese paper *(Paper)*. Japanese hand-made paper prepared from mulberry bark. The surface is similar to that of **Japanese vellum**.

Japanese vellum *(Paper)*. An expensive handmade paper. Prepared from the inner bark of the mulberry tree, thicker than **Japanese paper**.

japanners' gold-size *(Build.)*. See **gold-size**.

japanning *(Build.)*. The process of finishing an article with japans, especially the **stoving** of japans.

Japan wax *(Chem.)*. A natural wax obtained from sumach, mp 50°C. It has a high content of palmitin.

jargon aphasia *(Med.)*. Rapid unintelligible utterance, due to a lesion in the brain.

jargons, jargoons *(Min.)*. A name given in the gem trade to the zircons (chiefly colourless, smoky or of golden-yellow colour) from Ceylon. They resemble diamonds in lustre but are less valuable. See also **hyacinth**.

jarosite *(Min.)*. A hydrous sulphate of iron and potassium crystallizing in the trigonal system; a secondary mineral in ferruginous ores.

jarrah *(For.)*. A dense resistant wood from Australia. It is of a deep-red colour, and is used for construction, piles, heavy framing and railway sleepers.

jar-ramming machine *(Foundry)*. See **jolt-ramming machine**.

jaspé *(Textiles)*. (1) Plain woven fabric with a shaded appearance resulting from a warp-thread colour pattern. Used mainly for bedspreads and curtains. (2) Yarn made from two chemically different continuous filament yarns (e.g. nylon and polyester) *textured* together and then dyed in such a way that only one component is coloured.

jasper *(Min.)*. An impure opaque chalcedonic silica, commonly red owing to the presence of iron oxides.

JATO *(Aero.)*. Abbrev. for *Jet-Assisted Take-Off*.

jaundice *(Med.)*. *Icterus*. Yellow coloration of the skin and other tissues of the body, by excess of bile pigment present in the blood and the lymph. May be caused by excessive breakdown of blood (*haemolytic jaundice*), by failure of the liver to transport the pigments (*hepatic jaundice*) or failure to excrete the pigment through the biliary system (*obstructive jaundice*).

Javel water, eau de Javelle *(Chem.)*. A mixture of potassium chloride and hypochlorite in solution. Chiefly used for bleaching and disinfecting.

jaw *(Eng.)*. (1) One of a pair or group of members between which an object is held, crushed, or cut, as the *jaws* of a vice or chuck. (2) One of several members attached to an object, to locate it by embracing another object.

jaw breaker *(Min.Ext.)*. *Jaw crusher*, *Blake crusher*, *alligator*. Heavy-duty rock-breaking machine with fixed vertical, and inclined swing jaw, between which large lumps of ore are crushed.

jaws *(Print.)*. See **folding jaws**.

jaws *(Zool.)*. In gnathostomatous Vertebrates, the skeletal framework of the mouth enclosed by flesh or horny sheaths, assisting in the opening and closing of the [illegible] with teeth of horny plates. Invertebrates, any similar stru[illegible]ed at the anterior end of the alimentary tra[illegible]

J chain *(Immun.)*. A polypeptide chain with a high content of the amino acid cysteine, which enables it to form disulphide bonds. It helps to link together IgA molecules into polymeric forms and to hold IgM in pentameric form.

JCL *(Comp.)*. See **job control language**.

J-display *(Radar)*. A modified **A-display** with circular time base.

jean *(Textiles)*. Strong woven twilled fabric, used for overalls or casual wear. See **denim**.

jedding axe *(Build.)*. An axe having one flat face and one pointed peen.

jejunectomy *(Med.)*. Excision of part of the jejunum.

jejunitis *(Med.)*. Inflammation of the jejunum.

jejunocolostomy *(Med.)*. The formation, by operation, of a communication between the jejunum and the colon.

jejunotomy *(Med.)*. Incision of the jejunum.

jejunojejunostomy *(Med.)*. The formation, by anastomosis, of a communication between two parts of the jejunum, thus short-circuiting the part in between.

jejunostomy *(Med.)*. The operative formation of an opening into the jejunum.

jejunum *(Zool.)*. In Mammals, that part of the small intestine which intervenes between the duodenum and the ileum.

jelly *(Image Tech.)*. See **gel**.

jelutong *(For.)*. Lightwood Malayan hardwood from the genus *Dyera*. It is almost white in colour and takes paints better than polishing techniques. The tree also yields a resinous type of rubber.

jemmy, jimmy *(Build.)*. A small crowbar.

Jeppesen chart *(Aero.)*. Airway charts, airport maps and information, named after Ebroy Jeppesen who built up the basic format from 1926 to 1940.

jerk *(Med.)*. A sudden and brief contraction of a group of muscles. Often used to test a reflex, e.g. knee jerk.

jerkin head *(Build.)*. The end of a pitched roof which is hipped, but not down to the level of the feet of the main rafters, thus leaving a half-gable. Also called **shread head**.

jerk-pump *(Autos.)*. A timed fuel-injection pump in which a cam-driven plunger overruns a spill port, thus causing the abrupt pressure rise necessary to initiate injection through the atomizer.

jerks *(Print.)*. Violent intermittent pulls of paper through a web-fed printing press or folder due usually to incorrect or worn drives.

jersey fabric *(Textiles)*. The general name for knitted fabrics supplied in lengths.

jet *(Genrl.)*. A fluid stream issuing from an orifice or nozzle; a small nozzle, as the *jet* of a carburettor.

jet *(Min.)*. A hard coal-black variety of lignite, sometimes exhibiting the structure of coniferous wood; worked for jewellery in the last century.

JET *(Nuc.Eng.)*. *Joint European Torus*, at Culham, UK. Large **tokamak** experiment designed to use deuterium and tritium to produce energy by a fusion process.

jet coefficient *(Aero.)*. The basic nondimensional thrust-lift relationship of the jet flap;

$$C_J = J/\tfrac{1}{2}\rho V^2 S$$

where J = jet thrust, ρ = air density, V = speed and S = wing area.

jet condenser *(Eng.)*. One in which exhaust steam is condensed by jets of cooling water introduced into the steam space.

jet deflection *(Aero.)*. A jet-propulsion system in which the thrust can be directed downwards to assist take-off and landing.

jet drilling *(Min.Ext.)*. See **fusion drilling**.

jet dyeing *(Textiles)*. A machine for dyeing delicate fabrics, or garments, in which the material is gently circulated by the dye liquor being pumped at high velocity through jets or a narrow throat.

jet flap *(Aero.)*. A high-lift flight system in which (a) the

max gross *(Aero.)*. See maximum weight.

maxilla *(Zool.)*. In Vertebrates, the upper jaw: a bone of the upper jaw: in [illegible], an appendage lying close behind the mouth [illegible] modified in connection with feeding. pl. *maxillae*. adj. *maxillary, maxilliferous, maxilliform*.

maxillary *(Zool.)*. Pertaining to a maxilla: pertaining to the upper jaw: a paired membrane bone of the Vertebrate skull which forms the posterior part of the upper jaw.

maxilliped *(Zool.)*. In *Arthropoda*, especially *Crustacea*, an appendage behind the mouth, adapted to assist in the transference of food to the mouth.

maximally-flat *(Telecomm.)*. Said of amplifiers so designed that the circuit elements are transformed from filter sections incorporating stray admittances.

maximum and minimum thermometer *(Meteor.)*. An instrument for recording the maximum and minimum temperatures of the air between 2 inspections, usually a period of 24 hr. A type widely used is *Six's thermometer*.

maximum continuous rating *(Aero.)*. See power rating.

maximum demand *(Elec.Eng.)*. The maximum load taken by an electrical installation during a given period. It may be expressed in kW, kVA, or amperes.

maximum-demand indicator *(Elec.Eng.)*. An instrument for indicating the maximum demand which has occurred on a cicuit within a given period.

maximum-demand tariff *(Elec.Eng.)*. A form of charging for electrical energy in which a fixed charge is made, depending on the consumer's maximum demand, together with a charge for each unit (kWh) consumed.

maximum equivalent conductance *(Elec.Eng.)*. The value of the equivalent conductance of an electrolyic solution at infinite dilution with its own solvent.

maximum flying speed *(Aero.)*. See flying speed.

maximum landing weight *(Aero.)*. See weight.

maximum permissible concentration *(Radiol.)*. The recommended upper limit for the dose which may be received during a specified period by a person exposed to ionizing radiation. Also called *permissible dose*.

maximum permissible dose rate, flux *(Radiol.)*. That dose rate or flux which, if continued throughout the exposure time, would lead to the absorption of the maximum permissible dose.

maximum permissible level *(Radiol.)*. A phrase used loosely to indicate *maximum permissible concentration, dose* or *dose rate*.

maximum point on a curve *(Maths.)*. A peak on a curve. For the curve $y = f(x)$, the point where $x = a$ is a maximum if $f(a+h) - f(a)$ is negative for all values of h sufficiently small.

maximum-reading accelerometer *(Aero.)*. See accelerometer.

maximum safe air-speed indicator *(Aero.)*. A pilot's *air-speed indicator* with an additional pointer showing the indicated air speed corresponding to the aircraft's limiting Mach number and also having a mark on the dial for the maximum permissible air speed.

maximum take-off rating *(Aero.)*. See power rating.

maximum tensile stress *(Eng.)*. See ultimate tensile stress.

maximum traction truck *(Elec.Eng.)*. A special form of bogie or truck often used on trams, and arranged so that the greater part of the weight comes on the driving wheels, thereby enabling the maximum tractive effort to be obtained.

maximum usable frequency *(Telecomm.)*. That which is effective for long-distance communication, as predicted from diurnal and seasonal ionospheric observation. Varies on an eleven year cycle. Abbrev. *MUF*.

aximum value *(Elec.Eng.)*. See peak value.

aximum weight *(Aero.)*. See under weight. Also called *max take-off weight*, colloq. *max gross*.

as level speed *(Aero.)*. The maximum velocity of a ower-driven aircraft at full power without assistance om gravity; the altitude should always be specified.

as take-off weight *(Aero.)*. See weight.

axwell *(Elec.Eng.)*. The CGS unit of magnetic flux, the IKSA (or SI) unit being the *weber*. One maxwell = 0^{-8} weber.

Maxwell-Boltzmann distribution law *(Phys.)*. A la expressing the energy distribution among the molecu of a gas in thermal equilibrium.

Maxwell bridge *(Elec.Eng.)*. An early form of a.c. bridg which can be used for the measurement of inductance and capacitance.

Maxwell experiment *(Image Tech.)*. The pioneer demon stration of 3-colour additive synthesis, using 3 black-and white negatives.

Maxwellian viewing system *(Phys.)*. In some photo meters, spectrophotometers, colorimeters, etc., an arrangement in which the field of view is observed by placing the eye at the focus of a lens, instead of using an eyepiece.

Maxwell primaries *(Image Tech.)*. The colours red, gree and blue-violet, used in Maxwell's experiment.

Maxwell's circuital theorems *(Phys.)*. Generalized form of Faraday's law of induction and Ampère's Law (modified to incorporate the concept of displacement current). Two of *Maxwell's field equations* are direct developments of the circuital theorems.

Maxwell's circulating current *(Elec.Eng.)*. A mesh or cyclic current inserted in closed loops in a complex network for analytical purposes.

Maxwell's demon *(Chem.)*. Imaginary creature who, by opening and shutting a tiny door between two volumes of gases, could in principle concentrate slower (i.e. colder) molecules in one and faster (i.e. hotter) molecules in the other, thus reversing the normal tendency toward increased disorder or entropy and breaking the second law of thermodynamics.

Maxwell's distribution law *(Phys.)*. The distribution of numbers of gas molecules which have given speeds, or kinetic energies in a gas of uniform temperature. The law can be deduced from the *kinetic theory of gases*.

Maxwell's equations *(Telecomm.)*. Those fundamental laws of theoretical physics which govern the behaviour of electromagnetic waves in all practical situations. Used to analyse the propagation of radio waves in free space, at all sorts of boundaries and in all guided-wave structures or transmission lines.

Maxwell's field equations *(Phys.)*. Mathematical formulations of the laws of Gauss, Faraday and Ampère from which the theory of electromagnetic waves can be conveniently derived.

$$\operatorname{div} B = 0; \quad \operatorname{curl} H = \frac{\partial D}{\partial t} + J;$$

$$\operatorname{div} D = \rho; \quad \operatorname{curl} E = -\frac{\partial B}{\partial t}.$$

Maxwell's rule *(Elec.Eng.)*. A law stating that every part of an electric circuit is acted upon by a force tending to move it in such a direction as to enclose the maximum magnetic flux.

Maxwell's theorem *(Eng.)*. See reciprocal theorem.

Maxwell's thermodynamic relations *(Phys.)*. Four mathematical identities relating the pressure, the volume, the entropy and the thermodynamic temperature for a system in equilibrium. They are expressed in the form of partial derivatives relating the quantities.

mayday *(Telecomm.)*. Verbal international radio-telephone distress call or signal, corresponding to SOS in telegraphy. Corruption of Fr. *m'aidez*.

May's graticule *(Powder Tech.)*. An eyepiece graticule used in microscopic methods of particle-size analysis, having a rectangular grid for selecting particles, and a series of eight circles for sizing particles. The size of the circle diameters increases by $\sqrt{2}$ progression, and a series of parallel lines is superimposed on the rectangular grid.

maze *(Behav.)*. An apparatus consisting of a series of pathways in a more or less complicated configuration, beginning with a starting box, possibly including blind alleys, and ending in a goal box which generally contains a reward, this not being visible from the starting box. The simplest mazes are the T- and Y-mazes.

BEST COPY AVAIL

(*Nuc.Eng.*). See radiation trap (2).

(*Comp.*). See memory buffer register.

McBurney's point (*Med.*). A point situated on a line joining the umbilicus to the bony prominence of the hip-bone at the upper end of the groin, and 38 mm from the latter; a point of maximum tenderness in appendicitis.

McCabe-Thiele diagram (*Chem.Eng.*). A graphical method, based on vapour-liquid equilibrium properties, for establishing the theoretical number of separation stages in a continuous distillation process.

McColl protective system (*Elec.Eng.*). A form of protective system used on electric power networks; it operates on the balanced principle embodying biased beam relays.

McLeod gauge (*Chem.*). Vacuum pressure gauge in which a sample of low pressure gas is compressed in a known ratio until its pressure can be measured reliably. Used for calibrating direct-reading gauges.

MC, mc (*Genrl.*). Abbrev. for *Metric Carat*. See carat.

McNally tube (*Electronics*). A reflex klystron capable of being tuned electronically to a wide range of frequencies.

MCPA, MCP (*Chem.*). *4-chloro-2-methyl-phenoxyacetic acid* used as a selective weedkiller. Also called *methoxone*.

MCPB (*Chem.*). *4-(4-chloro-2-methylphenoxy)butanoic acid*, used as a weedkiller.

McQuaid-Ehn test (*Eng.*). A method of showing grain size after heating a ferrous alloy to the austenitic temperature range. Grain sizes are classified from one (the finest) to eight.

M_{crit} (*Aero.*). See critical Mach number.

Md (*Chem.*). The symbol for *mendelevium*.

m-derived section, network, filter (*Telecomm.*). A *T* or *pi* network section so designed that when two or more sections are joined to form a filter, their impedances match at all frequencies, although the individual sections may have different resonant frequencies.

MDF (*Telecomm.*). Abbrev. for *Main Distribution Frame*.

M display (*Radar*). Modified form of *A display* in which range is determined by moving an adjustable pedestal signal along the baseline until it coincides with the target signal; range is read off the control which moves the pedestal.

Me (*Chem.*). A symbol for the methyl radical $-CH_3$.

M & E (*Image Tech.*). Same as music and effects.

mean (*Stats.*). See expectation; (of a sample) the arithmetic mean.

mean calorie (*Phys.*). See calorie.

mean chord (*Aero.*). See standard mean chord.

mean curvature (*Maths.*). See curvature.

mean daily motion (*Astron.*). The angle through which a celestial body would move in the course of 1 day if its motion in the orbit were uniform. It is obtained by dividing 360° by the period of revolution.

meander (*Geol.*). Sharp sinuous curves in a stream particularly in the mature part of its course. The meanders are accentuated by continuing erosion on the convex side and deposition on the concave side of the stream course.

mean draught (*Ships*). Half of the sum of the forward and after draughts of a vessel; differs slightly from draught at half length.

mean effective pressure (*Eng.*). See brake-, indicated-.

mean establishment (*Surv.*). The average value of the lunitidal interval at a place.

mean free path (*Acous.*). Average distance travelled by a sound wave in an enclosure between wall reflections; required for establishing a formula for reverberation calculations.

mean free path (*Phys.*). The mean distance travelled by a molecule in a gas between collisions. It is dependent on the molecular cross-section $\pi\sigma^2$ so that

$$\lambda = \frac{1}{\sqrt{2\pi}\, n\sigma^2}$$

where n is the number of molecules per unit volume. According to the kinetic theory of gases it is related to the viscosity η by $\lambda = k\eta/\rho u$ where ρ = density, u = mean molecular velocity and k is a const [illegible] ½ and ⅓ depending on the approximation in [illegible].

mean free time (*Phys.*). Average time between collisions of electrons with impurity atoms in semiconductors; also of intermolecular collision of gas molecules.

mean hemispherical candle-power (*Phys.*). The average value of the candle-power in all directions above or below a horizontal plane passing through the source; called the *upper* or *lower* mean hemispherical candle-power according as the candle-power is measured above or below the horizontal plane through the source.

mean horizontal candle-power (*Phys.*). The average value of the candle-power of a light source in all directions in a horizontal plane through the source.

mean lethal dose (*Radiol.*). The single dose of whole body irradiation which will cause death, within a certain period, to 50% of those receiving it. Abbrev. *MLD*.

mean life (*Phys.*). (1) The average time during which an atom or other system exists in a particular form, e.g. for a thermal neutron it will be the average time interval between the instant at which it becomes thermal and the instant of its disappearance in the reactor by leakage or by absorption. Mean life = 1.443 × *half-life*. Also *average life*. (2) The mean time between birth and death of a charge carrier in a semiconductor, a particle (e.g., an ion, a pion), etc.

mean noon (*Astron.*). The instant at which the mean sun crosses the meridian at upper culmination at any place; unless otherwise specified, the meridian of Greenwich is generally meant.

mean normal curvature (*Maths.*). See curvature.

mean place (*Astron.*). The position of a star freed from the effects of precession, nutation, and aberration, and of parallax, proper motion, and orbital motion where appreciable. These corrections can be computed for any future date, and when applied to the mean place give the apparent place.

mean residence time (*Phys.*). Mean period during which radioactive debris from nuclear weapon tests remains in stratosphere.

mean sea level (*Surv.*). In UK the ordnance survey datum level, determined at Newlyn, Cornwall.

means, inequalities between (*Maths.*). $A \geq G \geq H$, where A is the arithmetic, G the geometric and H the harmonic mean of n positive numbers.

mean solar day (*Astron*). The interval, perfectly constant, between two successive transits of the mean sun across the meridian.

mean solar time (*Astron.*). Time as measured by the hour angle of mean sun. When referred to the meridian of Greenwich it is called Greenwich Mean Time. Before 1925 this began at noon but, by international agreement, is now counted from midnight; it is thus the hour angle of mean sun plus 12 hr, and is identical with *universal time*.

mean-spherical candle power (*Phys.*). The average value of the candle-power of a light source taken in all directions.

mean-spherical response (*Acous.*). That of a microphone or loudspeaker taken over a complete sphere, the radius of which is large in comparison with the size of the apparatus. For a loudspeaker, this response (total response) determines the total output of sound power, and therefore, in conjunction with the acoustic properties of an enclosure, the average reverberation intensity in the enclosure. For a microphone, this response is substantially equal to the response for reverberant sound. See reverberation response, total response.

mean-square error (*Stats.*). The expectation of the square of the difference between an estimate of a parameter and its true value, taken with respect to the sampling distribution of the estimate.

mean stress (*Eng.*). The midpoint of a range of stress. When it is zero, the upper and lower limits of the range have the same value but are in tension and compression respectively.

mean sun (*Astron.*). A fictitious reference point which has a constant rate of motion and is used in timekeeping in preference to the non-uniform motion of the real sun

264

ABLE

key drawing *(Prin* [illegible] thography and line-colour block making, an o[illegible] wing which serves as a guide in the making of the separate colour plates.

key drop *(Build.)*. A guard plate covering a keyhole and falling into position by its own weight.

keyed pointing *(Build.)*. Pointing which is finished with lines or grooves struck on the flat joint. See **flat pointing**.

keyer *(Telecomm.)*. A device for changing the output of a transmitter from one frequency (or amplitude) to another according to the intelligence transmitted.

key fossil *(Geol.)*. See **index fossil**.

Key-Gaskel syndrome *(Vet.)*. Feline dysautonomia of unknown aetiology. Symptoms include dilated pupils, dehydration, constipation, regurgitation and sometimes loss of anal sphincter tone.

keyhole limpet haemocyanin *(Immun.)*. A large copper-containing protein from a particular kind of limpet. Haemocyanins normally function as oxygen carrying molecules, but are widely used as immunogens in immunology since they are likely to be completely foreign to mammals. Abbrev. *KLH*.

keyhole saw *(Build.)*. One with stiff, narrow blade 6–10 in (150–250 mm) long, for internal, curved and small cuts. Also *padsaw*.

keying *(Eng.)*. The process of fitting a key to the key-ways in a shaft and boss.

keying *(Image Tech.)*. A video switching effect which creates a space within a picture into which another image is inserted.

keying *(Print.)*. Use of keyboard to input coded copy for eventual typesetting by mechanical means in single letter (Monotype), or slug form (Linotype), or via a **phototypesetter**.

keying wave *(Telecomm.)*. See **marking wave**.

key light *(Image Tech.)*. The principal lighting of the main subject in a scene.

key plan *(Build.,Eng.)*. A small-scale plan showing the relative disposition of a number of items in a scheme.

key plate *(Build.)*. An **escutcheon**.

key print *(Image Tech.)*. See **grey key image**.

key seating *(Eng.)*. A key-way, or the surface on to which a key is bedded.

key-seating machine *(Eng.)*. A machine tool for milling key-ways in shafts, etc., by means of an end mill, the work being supported on a table at right angles to the axis of the spindle. Feed is obtained by an automatic traverse of either the tool or the table.

keystone *(Civ.Eng.)*. The central voussoir at the crown of an arch.

keystone distortion *(Image Tech.)*. Distortion of an optical or electronic image in which a rectangle is reproduced as a trapezium with the vertical sides converging. Generally a result of the beam axis not meeting the screen at right angles.

key-to-disk *(Comp.)*. Input device for accepting data from a keyboard and writing directly to magnetic disk.

key-to-tape unit *(Comp.)*. Input device for accepting data from a keyboard and writing it directly onto tape.

key way *(Eng.)*. A longitudinal slot cut in a shaft or hub to receive a key.

key-way tool *(Eng.)*. A slotting machine tool used for the vertical cutting of key-ways, equal in width to that of the key-way. See **slotting machine**.

keywords *(Comp.)*. The most informative or significant words in a piece of text. These are some of the elements stored in most **information retrieval** systems. Also *index terms*.

kick *(Build.)*. See **frog**.

kick *(Min.Ext.)*. Sudden increase in pressure during well drilling, which if not controlled quickly can cause a **blowout**. See **kill line**.

kick-back *(Autos.)*. Shocks felt at the steering wheel, due to the *reversibility* of many steering devices.

kick copy *(Print.)*. On a web-fed printing press the printed and folded product is counted off in batches, each batch indicated by a [illegible] press which displaces one copy of the product to ind the intervals between batches. See **quire spacing**.

Kick's law *(Min.Ext.)*. Assumes that the energy requir for subdivision of a definite amount of material is the same for the same fractional reduction in average size of the individual particles, i.e. $E = k_k \log_e d_1/dr_2$, where E is the energy used in crushing, k_k is a constant, depend on the characteristics of the material and method of operation of the crusher, and d_1 and d_2 are the aver linear dimensions before and after crushing.

kicksorter *(Telecomm.)*. See **pulse height analyser (1)**.

kick stage *(Space)*. A propulsive stage used to provide an additional velocity increment required to put a spacecra on a given trajectory.

kid *(Hyd.Eng.)*. A bundle of brushes serving as a groyn

kidney *(Zool.)*. A paired organ for the excretion of nitrogenous waste products in Vertebrates.

kidney machine *(Med.)*. See **artificial kidney**.

kidney ore *(Min.)*. A form of the mineral haematite, oxide of iron, Fe_2O_3, which occurs in reniform masses, hence the name (Latin *ren*, kidney).

kidney piece *(Horol.)*. A cam, shaped like a kidney, used in perpetual calendar work to give the equation of time.

kidney stone *(Min.)*. A name given to **nephrite**, which was once supposed to be efficacious in diseases of the kidney (Gk. *nephros*, kidney).

kidney stones *(Med.)*. Hard deposits formed in the kidney. The composition varies, and kidney stones have been found to consist of uric acid and urates, calcium oxalate, calcium and magnesium phosphate, silica and alumina, cystine, xanthine, fibrin, cholesterol and fatty acids. Passage of the stones down the ureter may cause severe pain (*renal colic*).

kidney worm disease *(Vet.)*. In pigs the parasite the causative parasite if *Stephanurus dentatus*. The main target for infestation is the kidney with occasional spinal canal involvement. The intermediate host is the earthworm. In dogs *Dictyophyme renale* is the parasite,

kier *(Textiles)*. A large steel vessel in which yarn and cloth are boiled with alkaline liquors for scouring and bleaching. Now frequently replaced by continuous processing machinery.

kieselguhr *(Min.)*. See **diatomite**.

kieserite *(Min.)*. Hydrated magnesium sulphate which crystallizes in the monoclinic system; found in large amounts in some salt deposits.

kieve *(Min.Ext.)*. See **dolly tub**.

kieving *(Min.Ext.)*. See **tossing**.

kill *(Print.)*. In printing, an editorial instruction to delete entirely some item in preparation, derived from the use of the word as an instruction to distribute type.

kill, choke line *(Min.Ext.)*. Small bore pipe lines connected through the **blowout preventer stack**; they allow denser mud to be pumped into a borehole which has been shut out because of the danger of a **blowout**.

killed steel *(Eng.)*. Steel that has been *killed*, i.e. fully deoxidized before casting, by the addition of manganese, silicon and sometimes aluminium. There is practically no evolution of gas from the reaction between carbon and iron-oxide during solidification. Sound ingots are obtained. See also **rimming steel**.

killer *(Phys.)*. See **poison**.

kill string *(Min.Ext.)*. See **injection string**.

kiln *(Min.Ext.)*. Furnace used for: drying ore; driving off carbon dioxide from limestone; roasting sulphide ores or concentrates to remove sulphur as dioxide; reducing iron (II) ores to magnetic state in reducing atmosphere.

kilo- *(Genrl.)*. Prefix for denoting 1000; used in the metric system. E.g. 1 kilogram = 1000 grams.

kilocalorie *(Phys.)*. See **calorie**.

kilocurie source *(Radiol.)*. Giant radioactive source, usually in form of ^{60}Co.

kilocycles per second *(Phys.)*. See **kilohertz**.

kilo-electron-volt *(Phys.)*. See **keV**.

kilogram(me) *(Genrl.)*. Unit of mass in the MKSA (SI) system, being the mass of the *International prototype*

kilohertz *(Phys.)*. One thousand hertz or cycles per second. A multiple of the SI unit of frequency. Abbrev. kHz.

kilometric waves *(Telecomm.)*. Those with wavelengths between 1000 and 10 000 m.

kiloparsec *(Astron.)*. See parsec.

kilotex *(Textiles)*. See tex.

kiloton *(Phys.)*. Unit of explosive power for nuclear weapons equal to that of 10^3 tons of TNT.

kilovar *(Elec.Eng.)*. A unit of reactive volt-amperes equal to 1000 VArs. Abbrev. kVAr.

kilovolt-ampere *(Elec.Eng.)*. A commonly used unit for expressing the rating of a.c. electrical machinery and for other purposes; it is equal to 1000 volt-amperes. Abbrev. kVA.

kilowatt *(Elec.Eng.)*. A unit of power equal to 1000 watts and approximately equal to 1.34 h.p. Abbrev. kW.

kilowatt-hour *(Elec.Eng.)*. The commonly used unit of electrical energy, equal to 1000 watt-hours or 3.6 MJ. Often called simply a *unit*; abbrev. *kWh*. See **Board of Trade Unit**.

Kimball tag *(Comp.)*. Small punched card attached to merchandise which is detached when goods are sold, to provide machine-readable sales data.

Kimberley horse disease *(Vet.)*. *Walk-about disease*. A disease of horses in Australia due to poisoning caused by eating whitewood (*Atalaya hemiglauca*).

kimberlite *(Geol.)*. A type of mica-peridotite, occurring in volcanic pipes in South Africa and elsewhere, and containing xenoliths of many types of ultramafic rocks, and diamonds.

kinaesthesis *(Behav.)*. A general term for sensory feedback from muscles, tendons and joints, which inform the individual of the movements of the body or limbs, and the position of the body in space.

kinaesthetic *(Zool.)*. Pertaining to the perception of muscular effort.

kinase *(Biol.)*. An enzyme which catalyses the phosphorylation of its substrate by ATP. Thus protein kinases phosphorylate proteins and hexose kinases phosphorylate hexose.

kinematical theory of X-ray diffraction *(Phys.)*. A treatment which does not take account of the attenuation of the incident beam as it passes through the crystal nor the interference between the incident beam and multiply diffracted beams; a theory which can be applied to very thin or very small crystals.

kinematic chain *(Eng.)*. A number of links connected to one another to allow motion to take place in combination. It becomes a mechanism when so constructed as to allow constrained relative motion between its links.

kinematics *(Maths.)*. That branch of applied mathematics which studies the way in which velocities and accelerations of various parts of a moving system are related.

kinematic viscosity *(Phys.,Eng.)*. The coefficient of viscosity of a fluid divided by its density. Symbol v. Thus $v = \eta/\rho$. Unit in the CGS system is the stokes ($cm^2\,s^{-1}$); in SI $m^2\,s^{-1}$.

kinesalgia *(Med.)*. Feeling of pain on movement.

kinescope *(Image Tech.)*. US term for the picture tube in a receiver.

kinescoping *(Image Tech.)*. US term for film recording of a TV programme. Also *telerecording*.

kinesin *(Biol.)*. A protein of wide distribution in eukaryotes which is responsible for the movement of organelles to which it is attached along microtubules.

kinesis *(Behav.)*. A simple response to environmental stimuli in which the animal's response is proportional to the intensity of stimulation; it involves a change in speed of movement or rate of turning. Unlike a taxis, however, the animal's body is not oriented to the stimulus although the effected movements often produce a change of position relative to it. Cf. taxis.

kinetic energy *(Phys.)*. Energy arising from motion. For a particle of mass m moving with a velocity v it is $\frac{1}{2}mv^2$, and for a body of mass M, moment of inertia I_g, velocity of centre of gravity v and angular velocity ω, it is

kinetic friction *(Phys.)*. See friction.

kinetic heating *(Aero.)*. See dynamic heating.

kinetic pressure *(Aero.)*. See dynamic pressure.

kinetics *(Med.)*. The study of the rates at which chemical reactions and biological processes proceed.

kinetic theory of gases *(Phys.)*. A theory which accounts for the bulk properties of gases in terms of the motion of the molecules of the gas. In its simplest form the gas molecules are conceived as elastic spheres whose bombardment of the walls of the containing vessel causes the pressure exerted by the gas. If it is assumed that the size of the molecules is small compared with their mean spacing and that the molecules do not exert forces on each other except on collision, then the theory gives a simple explanation of the gas laws and yields useful results concerning gaseous viscosity and thermal conductivity.

kinetin *(Bot.)*. *6-furfurylaminopurine*. Synthetic plant growth regulator of the cytokinin type.

kinetochore *(Biol.)*. Paired structures within the centromeric region of metaphase chromosomes, to which spindle microtubules attach. They lie on each side of the primary constriction, and when viewed with the electron microscope appear as a trilaminar plate with microtubules entering at regular intervals.

kinetodesma *(Zool.)*. See kinety.

kinetosome *(Bot.)*. See basal body.

kinetosomes *(Zool.)*. See kinety.

kinety *(Zool.)*. A unit of structure in the Protozoa comprising the *kinetosomes* (the basal granules of the cilia and flagella) and the *kinetodesma* (a fine strand running from the kinetosomes). In Flagellata the line of cell division is parallel to the *kinetia* (symmetrical division), and in Ciliata the plane of cleavage cuts across the *kinetia* (percentien division).

king closer *(Build.)*. A three-quarter brick used to maintain the bond of the surface.

kingdom *(Bot.)*. Higher taxonomic rank; composed of number of divisions.

king pile *(Civ.Eng.)*. A pile driven down the centre of a wide trench to enable two short struts (butting on opposite sides of the pile) to be used, instead of one long one, for keeping the poling boards of opposite sides of the trench in position.

king pin *(Autos.)*. The pin by which a stub axle is articulated to an axle-beam or steering head; it is inclined to the vertical to provide caster action. Also called *swivel-pin*. For light vehicles, the king pin is now usually replaced by a pair of ball joints.

king post *(Build.)*. A vertical timber tie connecting the ridge and the tie-beam of a roof, shaped at its lower end to afford bearing to two struts supporting the middle points of the rafters. Also *broach-post*, *joggle-piece*, *joggle-post*, *king-piece*, *middle-post*.

king rod *(Build.)*. A vertical steel rod connecting the ridge and tie-beam of a couple-close roof, to prevent sagging of the tie-beam when it is required to support ceiling loads.

king's evil *(Med.)*. An old name for scrofula.

Kingston valve *(Eng.)*. A sea-valve fitted to a ship's side for the purpose of admitting water to circulating pumps, or flooding or blowing out ballast tanks.

kingswood *(For.)*. See **Brazilian kingswood**.

king tower *(Build.)*. In a derrick tower gantry, that one of the three timber towers through which the weight of the derrick itself is transmitted directly to the foundation below.

kinin *(Bot.)*. See **cytokinin**.

kinins *(Med.)*. A class of vasoactive peptides that are associated with local regulation of blood flow, e.g. bradykinin.

kink *(Electronics)*. An abrupt change or reversal in the slope of a *characteristic curve*, e.g. the change from forward to reverse bias in a semiconductor diode, the sudden increase of reverse current at a certain voltage in a Zener diode, or the region where a negative-resistance device shows increasing current with decreasing applied

BEST COPY AVAILABLE

where E_ν is th[illegible]ensity radiated at a temperature T within the n[illegible]equency range from ν to $\nu + d\nu$. h is Planck's constant, c the velocity of light, e the base of the natural logarithms and k Boltzmann's constant.

plançon *(For.)*. A log of hardwood timber roughly sawn or hewn to an octagonal shape, with a minimum of 10 in (250 mm) between opposite faces.

plane *(Build.)*. A wood-working tool used for the purpose of smoothing surfaces, reducing the size of wood and, in specialized forms, for grooving, rebating, and other purposes.

plane *(Maths.)*. A flat surface; one whose radii of curvature are infinite at all points.

plane baffle *(Acous.)*. Plane board, with a hole, at or near the centre, for mounting and loading a loudspeaker unit.

plane earth factor *(Phys.)*. Electromagnetic wave propagation, the ratio of the electric field strength which would result from propagation over an imperfectly conducting earth to that resulting from propagation over a perfectly conducting plane.

plane-iron *(Build.)*. The cutting part of a plane, which actually shapes the work.

plane of collimation *(Surv.)*. The imaginary surface swept out by the **line of collimation** of a levelling instrument, when its telescope is rotated about its vertical axis.

plane of polarization *(Phys.)*. The plane containing the incident and reflected light rays and the normal to the reflecting surface. The magnetic vector of plane-polarized light lies in this plane. The electric vector lies in the *plane of vibration* which is that containing the plane-polarized reflected ray and the normal to the plane of polarization. The description of plane-polarized light in terms of the plane of vibration is to be preferred as this specifies the plane of the electric vector.

plane of saturation *(Civ.Eng.)*. The natural level of the ground water.

plane of symmetry *(Crystal.)*. In a crystal, an imaginary plane on opposite sides of which faces, edges, or solid angles are found in similar positions. One half of the crystal is hence a mirror image of the other.

plane of symmetry *(Maths.)*. See **symmetry**.

plane polarization *(Phys.)*. When the vibrations of a transverse wave are confined to one direction, the wave is said to be plane-polarized. For electromagnetic waves the direction of the electric vector of a plane-polarized wave is the *plane of vibration*; the magnetic vector lies in a plane at right-angles to this. Light reflected at the *Brewster angle* is plane-polarized. Polarization of radio waves and microwaves occurs as a result of the way these waves are transmitted from aerials.

planer *(Print.)*. A flat piece of wood or rubber which is placed on a forme of type and tapped with a mallet to level the surface.

planer tools *(Eng.)*. Planing machine cutting-tools, similar to those used for turning, clamped vertically in a block pivoted in the clapper box on the head.

plane stock *(Build.)*. The body of a plane holding the plane-iron in position.

plane surveying *(Surv.)*. Surveying which makes no correction for curvature of earth's surface.

planet *(Astron.)*. The name given in antiquity to the seven heavenly bodies, including the sun and moon, which were thought to travel among the fixed stars. The term in now restricted to those bodies, including the Earth, which revolve in elliptic orbits about the sun; in the order of distance they are: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto. The two planets, Mercury and Venus, which revolve within the Earth's orbit are designated *inferior planets*, the planets Mars to Pluto are *superior planets*. Planets reflect the sun's light and do not generate light and heat.

plane table *(Surv.)*. A drawing-board mounted on a tripod so that the board can be levelled and also rotated about a vertical axis and clamped in position. An alidade completes the essential parts of a plane table. It is set up at ends of a suitable baseline where required survey points can be seen from these ends.

planetarium *(Astron.)*. A building in which an optical device displays the apparent motions of the heavenly bodies on the interior of a dome which forms the ceiling of the auditorium.

planetary electron *(Phys.)*. See **Bohr theory**.

planetary gear *(Eng.)*. Any gear-wheel whose axis describes a circular path round that of another wheel, e.g. the bevel wheels carried by the crown wheel of differential gear.

planetary nebula *(Astron.)*. A shell of glowing gas surrounding an evolved star, from which it is ejected. There is no connection with planets: the name derives from the visual similarity at the telescope between the disc of such a nebula and that of a planet. They represent late stages in the evolution of stars 1–4 times more massive than the Sun. Some thousands are known in our Galaxy.

plane-tile *(Build.)*. See **crown-tile**.

planetoid *(Astron.)*. See **minor planet**.

planetology *(Geol.)*. The study of the composition, origin and distribution of matter in the planets of the solar system.

plane wave *(Phys.)*. One for which equiphase surfaces are planes.

planigraphy *(Radiol.)*. See **tomography**.

planimeter *(Eng.)*. Integrating instrument for measuring mechanically the area of a plane figure, e.g. an indicator diagram. A tracing point on an arm is moved round the closed curve, whose area is then given to scale by the revolutions of a small wheel supporting the arm.

planing bottom *(Aero.)*. The part of the under surface of a flying-boat hull which provides hydrodynamic lift.

planing machine *(Eng.)*. A machine for producing large flat surfaces. It consists of a gear-driven reciprocating work-table sliding on a heavy bed, the stationary tool being carried above it by a saddle, which can be traversed across a horizontal rail carried by uprights. See **clapper box**.

planisher *(Eng.)*. (1) Hammer or tool for planishing. (2) A **rolling mill**.

planishing *(Eng.)*. Giving a finish to metal surfaces by hammering.

plankton *(Ecol.)*. Animals and plants floating in the waters of seas, rivers, ponds, and lakes, as distinct from animals which are attached to, or crawl upon, the bottom; especially minute organisms and forms, possessing weak locomotor powers.

planning grid *(Arch.)*. Squared grid scaled in modules used in designing for modular construction.

plano-convex *(Image Tech.,Phys.)*. Said of a lens with one surface flat and the other curved.

planogamete *(Bot.,Zool.)*. A motile or wandering gamete; a zoogamete.

planographic process *(Print.)*. Process in which the printing image is on a level with the plate, which is specially treated to accept ink while the surrounding areas reject it. See **collotype**, **lithography**.

planospore *(Bot.)*. See **zoospore**.

planozygote *(Bot.)*. A motile zygote.

plan-position indicator *(Radar)*. Screen of a CRT with an intensity-modulated and persistent radial display, which rotates in synchronism with a highly directional antenna. The surrounding terrain is thus painted with relevant reflecting objects, such as ships, aircraft, and physical features. Abbrev. *PPI*. See **azimuth stabilized PPI**.

plant *(Bot.)*. A photosynthetic organism or one related to it. It will always include the seed plants, almost always the pteridophytes and bryophytes, usually the algae and the fungi and sometimes the bacteria also.

plant *(Eng.)*. (1) The machines, tools and other appliances requisite for carrying on a mechanical or constructional business; the term sometimes includes also the building and the site and, in the case of a railway, the rolling stock. (2) The permanent appliances needed for the equipment of an institution.

planta *(Zool.)*. The sole of the foot in land

plantation (*Build.*). A slate size, 330 × 280 mm, 13 × 11 in.

planted moulding (*Build.*). A moulding cut out of a separate strip of wood of the required section and secured to the surface to be decorated.

Planté plate (*Elec.Eng.*). See **formed plate**.

plantigrade (*Zool.*). Walking on the soles of the feet, as Man. Cf. **digitigrade**, **unguligrade**.

planting (*Build.*). The operation of forming a plant moulding.

plant load factor (*Elec.Eng.*). The ratio of the total number of kWh supplied by a generator or generating station to the total number of kWh which would have been supplied if the generator or generating station had been operated continuously at its maximum continuous rating.

plant pathology (*Bot.*). See **phytopathology**.

planula (*Zool.*). A larval form of some Invertebrates, especially Coelenterata; it consists of an outer layer of ciliated ectoderm and an inner mass of endoderm cells.

plaque (*Biol.*). Areas of cell destruction in a bacterial colony grown on a solid medium, or tissue culture monolayer preparation due to infection with a virus.

plaque (*Med.*). A layer of amorphous material adhering to the surfaces of teeth.

plaque (*Min.Ext.*). White-enamelled saucer-shaped disk used in spot checking of products made during ore treatment. It has taken the place of the old vanning shovel. A sample is gently manipulated on it with added water, to separate the light from the heavy constituents.

plashing (*Build.*). The process of intertwining branches in forming hurdles, etc.

plasm (*Biol.*). Protoplasm, especially in compound terms, as *germ plasm*.

plasma (*Electronics*). Synonym for the positive column in a gas discharge.

plasma (*Med.*). The watery fluid containing salts, protein and other organic compounds, in which the cells of the blood are suspended. When blood coagulates it loses certain constituents (e.g. fibrinogen and cells) and becomes serum.

plasma (*Min.*). A bright-green translucent variety of cryptocrystalline silica (*chalcedony*). It is used as a semiprecious gem.

plasma (*Phys.*). Ionized gaseous discharge in which there is no resultant charge, the number of positive and negative ions being equal, in addition to un-ionized molecules or atoms.

plasma-arc cutting (*Eng.*). Cutting metal at temperatures approaching 35 000°C by means of a gas stream heated by a tungsten arc to such a high temperature that it becomes ionized and acts as a conductor of electricity. Heat is not obtained by a chemical reaction; the process can therefore be used to cut any metal.

plasma cell (*Immun.*). Name given to the end stage of differentiation of B lymphocytes into cells wholly devoted to synthesis and secretion of immunoglobulins. They have a very highly developed endoplasmic reticulum and a prominent Golgi apparatus, and in stained preparations are recognizable by a basophilic cytoplasm with a juxta-nuclear 'vacuole', and an eccentrically placed nucleus with a 'clock face' appearance. Plasma cells are not known to revert to resting B-lymphocytes, but rather to become exhausted and die. They are prominent in sites of intensive antibody synthesis. Plasma cell tumours occur and are termed *plasmacytomas* or *myelomas*.

plasmacytoma (*Immun.,Med.*). *Myeloma*. A tumour of plasma cells, which is often preferentially localized in the bone marrow and where it produces typical erosion of the local bone (hence the term *myeloma*). Plasmacytomas continue to secrete an immunoglobulin product, although this may sometimes have sections of the normal amino acid sequence missing. Such tumours arise spontaneously but rarely in several species, but in certain strains of mice they can be caused to appear regularly following intraperitoneal administration of mineral oil. Mouse myelomas are widely used to study immunoglo-

plasma heating (*Nuc.Eng.*). In fu [illegible]ch, plasmas may be heated by ohmic heating, compression by magnetic fields, injection of high energy neutral atoms, and by cyclotron resonance heating.

plasmalemma (*Biol.*). The boundary membrane of the cell which regulates the passage of molecules between the cell and its surroundings. The plant *cell wall* is outside the plasmalemma. *Plasma membrane* is the commoner term for animal cells.

plasmalogen (*Biol.*). Phosphatide in which a hydrocarbon chain is bound to a glycerol carbon by an unsaturated ether bond rather than an ester link.

plasma membrane (*Biol.*). The bounding membrane of cells which controls the entry of molecules and the interaction of cells with their environment. Like most cell membranes it consists of a lipid bilayer traversed by proteins. *Plasmalemma* is the commoner term in botany.

plasma-, plasmo-, -plasm (*Genrl.*). Prefix and suffix from Gk. *plasma*, gen. *plasmatos*, anything moulded.

plasma temperature (*Nuc.Eng.*). Temperature expressed in degrees K (thermodynamic temperature) or electron volts (kinetic temperature). 1 KeV = 10 000 K.

plasma torch (*Phys.*). One in which solids, liquids or gases are forced through an arc within a water-cooled tube, with consequent ionization; de-ionization on impact results in very high temperatures. Used for cutting and depositing carbides.

plasmid (*Biol.*). A genetic element containing nucleic acid and able to replicate independently of its host's chromosome. Often carries genes determining **antibiotic resistance**. Much used in recombinant DNA procedures.

plasmin (*Med.*). A substance in blood capable of destroying fibrin as it is formed.

plasminogen (*Med.*). The precursor of plasmin in the blood.

plasmocyte (*Zool.*). See **leucocyte**.

plasmodesma (*Bot.*). A fine tube of protoplasm which connects the protoplasts of two adjacent cells through the intervening wall. See also **primary pit-field**, **symplast**.

plasmodium (*Bot.*). A multinucleate mass of naked (wall-less) protoplasm, which moves in an amoeboid fashion and constitutes the thallus as in the Myxomycetes. Cf. **pseudoplasmodium**.

plasmodium (*Zool.*). A syncytium formed by the union of uninucleate individuals without fusion of their nuclei. adj. *plasmodial*.

plasmogamy (*Biol.*). Fusion of cytoplasm as distinct from fusion of nucleoplasm; *plastogamy*.

plasmogamy (*Bot.*). The fusion of protoplasts, e.g. of gametes in a sexual reproductive cycle. In most organisms it is followed more or less immediately by karyogamy (fusion of nuclei); in some fungi it may result in a heterokaryon. See also **dikaryophase**.

plasmoid (*Phys.*). Any individual section of a plasma with a characteristic shape.

plasmolysis (*Bot.*). Process in which the protoplast of a plant cell shrinks away from the wall following water loss due to exposure to a solution of higher osmotic pressure, the wall being permeable to the solute but the plasmalemma not. Cf. **cytorrhysis**.

plasmoma (*Med.*). See **plasmacytoma**.

plaster (*Build.*). A general name for plastic substances which are used for coating wall surfaces, and which set hard after application. See also **acoustic plaster**.

plaster board (*Build.*). A building board made of plaster with paper facings, used as a base for plaster or providing a finish of its own.

plasterer's putty (*Build.*). A preparation similar to **fine stuff** made by dissolving pure lime in water and passing it through a fine sieve.

plaster mould casting (*Eng.*). Small, precision parts of non-ferrous alloys are cast in plaster moulds which are destroyed when the casting is removed.

plaster of Paris (*Chem.*). Partly dehydrated gypsum, $2CaSo_4$, H_2O (hemihydrate). When mixed with water, it evolves heat and quickly solidifies, expanding slightly.

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB I
SESSION 6

VOCABULARY # 2

Audit ____

____

Selects ____

____

Gate ____

____

Green ____

____

Slip ____

____

Grog ____

____

Slug ____

____

ZIRCOA COMMUNICATIONS ON THE JOB I

OBJECTIVES

SESSION 7

- Identify and select homophones and homographs
- Demonstrate ability to draw logical conclusions
- Read and interpret job-related instruction
- Practice job-related Vocabulary Improvement

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB I
SESSION 7

FOLLOWING INSTRUCTIONS

How many times have we heard or used the old adage " when all else fails read the directions!" ? These words are important. Yet how often, especially at work, do we follow this advice? Not relying on directions or instructions for tasks that are routine may be the quickest way of doing something. Using these old habits may prove dangerous when a new process, procedure or machine sits in front of you.

Encourage participants to discuss this adage. Do they live their lives by it or totally ignore the instructions? These differences can be based on an individual's preferred learning styles, their upbringing, their mentors, trainers, company values and/or company environment.

WHY FOLLOW INSTRUCTIONS?

BRAINSTORM THESE RESPONSES AND ANY OTHERS !!

Safety for self	injuries etc.
Safety for others	next person to get or use equipment or product
Safety for equipment	responsible for costly breakdowns or repairs
Safety of the process	costly defects/rejects next customer in process (internal or external)

TECHNICAL INSTRUCTIONS

It is common knowledge that many technical manuals and instructions are poorly written and difficult to follow. This leads to their lack of use. Many companies try to rewrite procedures and instructions to make them easier to use and increase the usage of these written materials.

NOTE: It may be helpful to talk about the fact that Zircoa is currently rewriting all Standard Process Procedures (SPPC s). This is supposed to be done in teams that include employees. Input and insight from front-line workers in theory should help to increase usage of SPPCs on a daily or routine basis. Many supervisors are writing these documents on their own at high and complex reading levels which may sabotage their use.

Technical manuals and standard process procedures will be explored in later sessions.

STEPS TO SIMPLIFY INSTRUCTIONS

Instructions may be written in an orderly easy to read format. These usually include numbers, a logical sequence and easy to understand language.

Example:

1. Complete all information on form.
2. Sign and date form.
3. Mail form to this address ______, in envelope provided.

The form may end up being impossible but the directions are clear.

In most cases the order in which the steps are preformed is very important. What if step 3 above was performed before steps 1 or 2 ? Often a routine task (esp. at work) becomes so automatic that the steps are hard to explain. When you think of the steps of a procedure, explain and order the steps as if you were guiding a person who had never done the task. Keep their safety in mind! The next set of instructions need to be placed in the proper order. Give it a try.

COMMUNICATIONS ON THE JOB I
SESSION 7

ACTIVITY 1

Have Participants place number order in blank space. Discuss: Same order? What if 2 comes after 4 and so on. Are there more steps? Is this specific enough? Do we realize that there are so many steps in such a simple procedure until we try to explain it- or TEACH IT ?

TO CHANGE A LIGHT BULB TO A HIGHER WATTAGE:

1. Obtain higher watt bulb.
2. If old bulb is still lit, turn it off and let it cool. Don't touch hot bulb!
3. Leave power to socket off.
4. Gently hold bulb and unscrew in counter clockwise motion.
5. Place old bulb in a safe place
6. Take higher wattage bulb and place into the socket.
7. Hold bulb gently and screw clockwise into the socket until tight.
8. Turn on power to socket.

ACTIVITY 1

Place these instructions in the proper order. Fill in the correct number of each step in the blank.

TO CHANGE A LIGHT BULB TO A HIGHER WATTAGE:

_____ Take higher wattage bulb and place into the socket.

_____ Turn on power to socket.

_____ Gently hold bulb and unscrew in counter clockwise motion.

_____ Obtain higher watt bulb.

_____ Place old bulb in a safe place

_____ Leave power to socket off.

_____ Hold bulb gently and screw clockwise into the socket until tight.

_____ If old bulb is still lit, turn it off and let it cool. Don't touch hot bulb!

STEPS TO SIMPLIFY INSTRUCTIONS (CONT'D)

So far we have looked at instructions that have easy to identify steps. Instructions also come written in paragraph form. These can look very confusing and overwhelming at first. Any set of instructions can be reworked to make them easier to follow. You may already have a method that comes in handy. It may almost be an automatic thinking process.

Here is a method that separates instructions into manageable parts. This method combines the memory systems of association and classification that were presented earlier in this course. It also presents the word **PRAISE** as a mnemonic or memory assisting device. The word PRAISE helps you remember the steps in order. It also reminds you to give yourself credit or **PRAISE** after you successfully use this method.

1) $\boxed{P}$ ositive, confident attitude toward being able to accomplish this new or different task or set of instructions. Give yourself credit for past accomplishments.

2) $\boxed{R}$ ead all of the instructions before beginning any of them. This gives you the whole picture before bolting headlong into one step.

3) $\boxed{A}$ sk yourself and be able to answer

   What do I need to accomplish? What am I being asked to do here?
   What is the desired result or finished product?
   Why is it important?

4) $\boxed{I}$ dentify words that are new, technical or unfamiliar. Use your new and improved dictionary skills.

5) $\boxed{S}$ pecial equipment needed? Gather any:

   - equipment (calculator, gloves, cart)
   - materials (procedure manuals, blueprints, batch ticket)
   - information (specifications, computer printouts)

   needed to perform the task.

6) $\boxed{E}$ asy action words singled out that are used in the instructions. Give them special attention. These will be red flag words signaling **ACTIONS** to take!

   Example: **load** the cart.
   insert the cutting tool.
   record the weight.

STEPS TO SIMPLIFY INSTRUCTIONS (CONT'D)

After completing the six **PRAISE** steps remember to:

- Complete each step of the instructions in the correct order.

If you will use these instructions often:

- Create your own set of instructions to help you remember the steps.

If the instructions are in paragraph form use:

- **PRAISE** Step 6 - **Easy Action Words** to help break it up into individual steps. Make one step to a line with it's own verb.

ACTIVITY 2 Try it!

Use the Zircoa instruction paragraph below to try **PRAISE** Step 6 - **Easy Action Words**:

vii The centre cap and the piston assembly should now be removed from the low pressure cylinder. By gripping the low pressure piston retaining plate the nyloc nut retaining the high pressure piston can be removed. The piston rod can now be withdrawn from the seal in the centre plate. Care should be taken not to scratch or damage the surface of the piston rod.

COMMUNICATIONS ON THE JOB I
SESSION 7

CONTEXT

Define and help participants explore context in reading materials. Many times, while reading, an unfamiliar word crops up. Often it is possible to figure out it's meaning by gathering clues from "context". For example: while reading a novel, newspaper, or magazine article, a word you've never seen appears. Do you stop to look it up as was suggested in the Dictionary Module ? To quickly go on reading, the reader often defines the word by figuring out it's meaning from the words and thoughts around it. This is the context of the sentence which helps determine the meaning of a strange or unknown word.

The third method of finding synonyms is the handiest for everyday reading and also takes us into problem solving and drawing inferences from all reading.

USING CONTEXT AND DRAWING LOGICAL CONCLUSIONS

(Participants have blanks)

To draw logical conclusions requires " **active reading** " in which a dialogue takes place with the author. The reader is answering questions while reading based on:

1) knowledge

2) experience

3) sound reasoning

These three skills added together = **decision making** which is the crucial basis for technical reading.

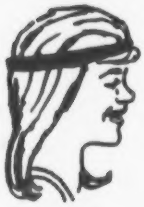
ACTIVITY 3 Context clues

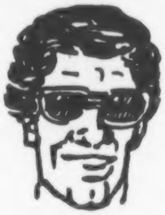
Participants must be "detectives" and use context clues to identify the "suspects".

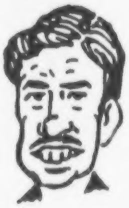
COMMUNICATIONS ON THE JOB I
SESSION 7

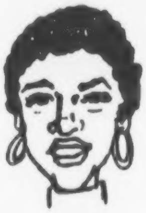
ACTIVITY 3

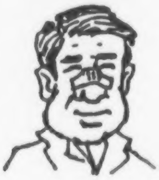
To be a successful technical reader, you must be a "detective" and find clues in your reading. Many descriptions and instructions are sketchy and hard to understand. In this activity match the descriptions to the suspects. Fill in the correct letter for each match.


A


B


C


D


E

This suspect:

SAMPLE: ___G___ 1. has a thinning hay loft.

______ 2. remembers to dot the ties.

______ 3. is a real pearl.

______ 4. never uses a razor.

______ 5. wears shades and a dimple.

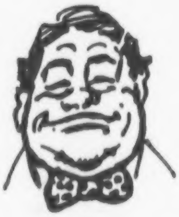
______ 6. wears hoops instead of shooting them.

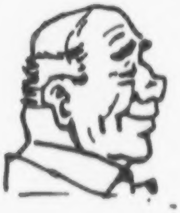
______ 7. loves petite caps.

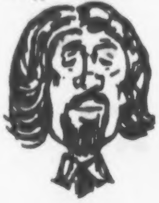
______ 8. has a cut about the rest.

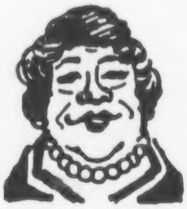
______ 9. better see the orthodontist.

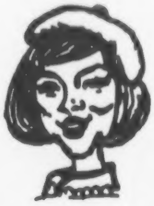
______ 10. is in a band.


F


G


H


I


J

Did you have trouble matching these decriptions to the suspects? To be successful, you had to carefully read the brief descriptions; then search for clues to link them to the illustrations. When reading technical information, even if it is poorly written, you must find clues which improve communication between the writer and the audience.

From: READING AND UNDERSTANDING TECHNICAL INFORMATION by Richard Marsh

COMMUNICATIONS ON THE JOB I
SESSION 7

CONTEXT AND COMPREHENSION

ACTIVITY 4

Comprehension is closely tied to inferring from context.

Have participants do the reading and answer the questions. They should try to answer the questions at least the first time through without looking back at the story. Then they may refer back to avoid random guessing. The comprehension questions in this reading must be gained by inference.

ACTIVITY 4

How Grandpa Came into Money

He was a sweet man, my grandfather, but when the brains were passed out he must have been somewhere else. I still respect how Grandmother could raise a family on his earnings.

Perhaps you can understand what it meant when, one fine day, Lady Luck smiled on Grandfather. He got himself in a train wreck.

Now, if something like that happened to you (and you lived through it) you had it made. The railroad would pay. So all of the lucky people on the train knew exactly what to do: they began to groan loudly and twist about on the ground while waiting for the doctors and stretchers to come.

All but Grandfather!

Never in his life had he missed a meal and he was not going to start now. No sir! Not for a little trainwreck. So he cut himself a walking stick and set out for home—a three hour walk.

In the meantime, the news of the wreck had already reached our town and the news had reported, "No deaths."

I cannot describe the many looks that passed across my grandmother's face when she saw her husband come strolling in the door, covered with dust, a bit tired from his long walk, but safe and smiling for he was just in time for dinner. First came joy at seeing that her man was not hurt. Then the joy turned into anger.

Grandfather had passed up his one and only golden chance.

So Grandmother turned into a kind of wild storm. Before he knew what was happening, he found himself without his pants and in bed. His complaints did him no good. Grandmother slapped a wet towel on his head while Mother went to search for the only medicine we had in the house—castor oil!

Grandfather cried out in fear and tried to hide under the blanket, but Mother dosed him anyway. Poor man! The only thing he really needed was his dinner. But what could he or anyone else do once his wife and daughter had made up their minds.

And then came the time of waiting. The two women did all they could do to keep Grandpa in bed and coached him carefully on what to say when the railroad people came. Grandpa nodded and said he would do as he was told. However, he bribed one of us children to find his pants for him and got out of bed anyway.

And out of bed he was when the insurance people from the railroad came to our town. Pants, boots, and all, grandpa was stuffed into bed and the covers were pulled up to his chin. The shades were lowered, the castor oil was placed by his bed, and the insurance people were brought in.

From the first minute it was clear that Grandpa had forgotten all of the careful coaching. He beamed a welcome to the insurance people and told them how well they looked. He then went on to talk about the weather and crops. When the railroad doctor was able to get a word in and asked him what injuries he had gotten in the train wreck, my grandfather smiled and said, "There's really nothing at all wrong with me that 100,000 dollars couldn't cure."

Mother promptly fainted. Grandmother screamed and ran out of the room. The insurance men doubled up with laughter.

After they had stopped laughing and revived my poor mother, the insurance men gave Grandpa 5,000 dollars- making him the richest man in our little town.

But to his dying day, Grandpa could never understand why the insurance men had given him the money.

Adapted from "How Grandpa Came into Money" by Else Zentner.

COMMUNICATIONS ON THE JOB I

SESSION 7

About the Story. Choose the best answer from the four choices and write it on the line.

1. Who is telling the story in "How Grandpa Came into Money"? ____________________

   (a) Grandpa
   (b) Mother
   (c) the granddaughter
   (d) the grandmother

2. What does Grandpa seem to like best? ____________________

   (a) farming
   (b) food
   (c) money
   (d) train rides

3. The other people on the train were ____________________.

   (a) badly injured
   (b) faking injuries
   (c) in a state of shock
   (d) killed

4. The grandmother's *first* feeling when she sees Grandpa coming in the door is ____________________.

   (a) calm
   (b) happiness
   (c) rage
   (d) sadness

5. Grandpa is given castor oil because ____________________.

   (a) Grandmother is angry with him
   (b) he is ill from the train wreck
   (c) he needs a little castor oil now and then
   (d) there is no other medicine to give him

6. When the insurance men come to the house, ____________________.

   (a) Grandpa is being given a dose of castor oil
   (b) Grandpa is eating dinner
   (c) Grandpa is nude
   (d) Grandpa isn't where he's supposed to be

ACTIVITY 5

Use the technical reading with key words missing. This reading shows the participants how drawing logical conclusions from context is done almost automatically in reading. They are asked to fill in the blanks with the correct word.

The terms #10 and #11 are antonyms and #7 and #8 are synonyms or synonymous. These word groups, which help a reader draw inferences from context, will be discussed in the next session.

COMMUNICATIONS ON THE JOB I
SESSION 7

7. Which of the following is *not* part of Grandmother's plan to convince the insurance men that Grandpa has been injured in the train wreck? ____________________
   - (a) She lowers the shades.
   - (b) She pulls up the covers.
   - (c) She puts Grandpa in bed with his clothes on.
   - (d) She puts castor oil by his bed.

8. When Grandpa answers the insurance men's questions about his injuries, the men are ____________________.
   - (a) amused
   - (b) angry
   - (c) confused
   - (d) disgusted

9. Why did the insurance men give Grandpa the money? ____________________
   - (a) He has such an awful wife.
   - (b) He needs it.
   - (c) He is so humorous.
   - (d) We don't really know why.

10. The family in this story lives ____________________.
    - (a) in a city
    - (b) in a town
    - (c) on a farm
    - (d) on an island

Explain how your answers depended on the context of the story:

____

____

____

____

____

COMMUNICATIONS ON THE JOB I
SESSION 7

ACTIVITY 5

Ⓐ INSTRUCTIONS

STOP

Before starting the machine.

Ⓑ IS EVERYONE'S CONCERN

A machine tool for cutting operations can be an extremely ① machine. It can, however, be turned into a very dangerous machine. It is up to you, as the user, to make sure that this does not happen. The same applies to other persons who carry out work directly related to the operation of the machine tool as well as to company management and others within the company whose jobs revolve around the machine tool. Everyone must be ② conscious. If everyone gives a thought to ③ accidents can be avoided. Serious accidents and expensive breakdowns on machines and equipment can be avoided if everyone understands and follows the ④ measures outlined in this paper as well as the general ⑤ rules applicable within the company.

We are, of course, aware that the proposed ⑥ measures do not encompass all situations within a company or all types of operations relating to chip-removing machine tools.

These proposals must therefore be combined with a large degree of ⑦ and ⑧.

Always think of ⑨! Remember that a machine tool for cutting operations can either be extremely ⑩ or very ⑪. It is up to you!

A. ____________________

B. ____________________

1. ____________________

2. ____________________

3. ____________________

4. ____________________

5. ____________________

6. ____________________

7. ____________________

8. ____________________

9. ____________________

10. ____________________

11. ____________________

COMMUNICATIONS ON THE JOB I
SESSION 7

ZIRCOA VOCABULARY # 3

Nozzle ____________________

____

Process ____________________

____

Clinker ____________________

____

Ware ____________________

____

Slurry ____________________

____

Calipers ____________________

____

Grain ____________________

____

OBJECTIVES

SESSION 8

- Differentiate between the meanings of common prefixes and suffixes
- Identify and select synonyms, antonyms, homophones and homographs
- Demonstrate ability to read technical manuals
- Practice job-related Vocabulary Improvement

BEST COPY AVAILABLE

OBJECTIVES

SESSION 9

- Read, analyze, and prepare job-related memos, processes and procedures
- Practice job-related Vocabulary Improvement

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB I
POST - ASSESSMENT

1) Name the four Preferred Learning Style categories represented by these initials:

V

A

K

T

2) Name one of the three components of effective learning.

3) Mark each statement about listening True or False:

______ People tend to pay attention to what interests them.

______ Hearing and listening are the same.

______ Most people have a short attention span and have trouble concentrating on the same thing for too long.

______ The speaker is totally responsible for the success of communication.

______ When a listener's emotional level is high, he or she will be an effective listener.

______ Listening is a natural process.

______ Listening is a skill.

______ Listening requires little energy; it's "easy".

______ Giving advice and telling the speaker what to do is not a listening skill.

______ Speaking is a more important part of the communication process than listening.

4) List below 4 techniques that help people learn more effectively:

____________________ ____________________

____________________ ____________________

5) Describing a persons behavior is more helpful than telling them what kind of a person you think they are. True False

6) When a person labels a behavior good or bad, right or wrong, they are using an "I-Rational Approach" to communication. True False

7) Giving a person praise helps them work better. True False

8) Roleplaying is useful in training sessions. True False

9) The dictionary is considered a " power tool ". True False

10) Phonics skills are an important part of adult reading. True False

11) Name two types of dictionaries that are useful everyday.

____________________ ____________________

12) Name 2 components of a dictionary page.

____________________ ____________________

13) How many consonants are in the English alphabet? ____________________

14) The letters **w** and **y** are: (circle one answer)

consonants vowels both consonants and vowels

15) Circle the words with the short **e** sound:

she verse fret Pete

bench these press wed

16) A person's attitude is an important part of the reading process. True False

17) Name two of the four major components of Reading.

____

____

18) A person should always try to maintain the same reading speed no matter what they are reading. True False

19) Reading is learned only at an early age. True False

20) A person must read every word to be a "good" reader. True False

21) If you read very fast you should still try to remember everything you read. True False

22) Name three good reading habits.

____

____

____

23) One word can have several different meanings. True False

24) A homophone is a ____________________________

25) Asking a co-worker is an acceptable way to find out what a new technical word means? True False

26) What does CNC stand for?

____

27) What does SPC stand for?

____

28) Read the following:

Producing a quality product at a fair price is the goal of any manufacturing plant. Therefore, quality control must be an important aspect of Zircoa's process. Product quality can be controlled in two ways.

What is the main topic of this reading:

____

____

29) Define the following Zircoa terms:

Slurry ______________________________________

____

Audit ______________________________________

____

Selects ______________________________________

____

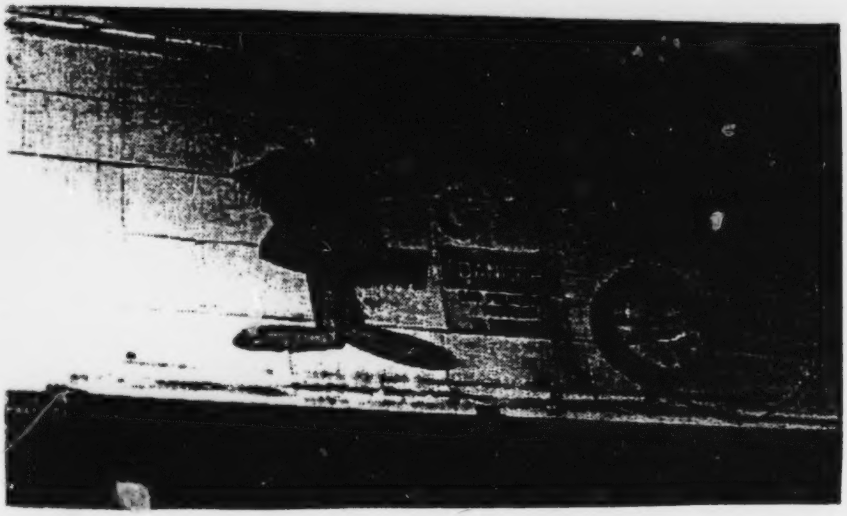
Proprietary ______________________________________

____

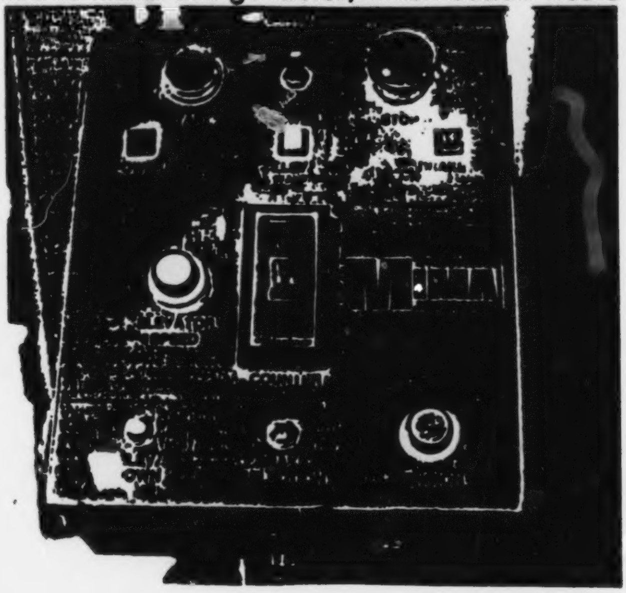
Process ______________________________________

____

30) What is the definition of the LARGE word this cute guy is yelling?



31) If you wanted to make this go faster, which button would you push ?



BEST COPY AVAILABLE

TRW

Communications

on-the-job

© 1994, Cuyahoga Community College

This curriculum was developed with support from the US Department of Education, National Workplace Literacy Program. Reproduction of the curriculum in part or total, with the customary credit tot the source, is permitted.

II

TRW COMMUNICATIONS ON THE JOB II
SESSION OVERVIEW

10 2-Hour Sessions

Session 1

Self-Awareness and Personal Learning Styles
Pre-Assessment

Session 2

Successful Learning Strategies
Using the Dictionary

Session 3

The Process and Types of Reading
Active and Passive Reading
Skimming and Scanning
Technical Vocabulary Building System

Session 4

Homophones and Homographs
Previewing
Job-related Vocabulary Improvement

Session 5

Prefixes and Suffixes, Synonyms and Antonyms
Identifying Main Ideas, Topics, and Details
Job-related Vocabulary Improvement

Session 6

Following Instructions, Drawing Logical Conclusions
Reading and Writing: Memos, Processes and Procedures
Job-related Vocabulary Improvement

Session 7

Active Listening Skills
Job-related Vocabulary Improvement

Session 8

How to Deal with Difficult Communication Situations
Role-playing Exercise
Job-related Vocabulary Improvement

Session 9

Identifying codes and symbols on schematics and blueprints
Job-related Vocabulary Improvement

Session 10

Review/Wrap-up
Post-Assessment
Evaluation

S:\WSHARE\GRANT\NEWCOM2\COM2MOD.TRW

COMMUNICATIONS ON THE JOB II
PRE - ASSESSMENT

1) Name the four Preferred Learning Style categories represented by these initials:

V

A

K

T

2) Name one of the three components of effective learning.

____

3) Mark each statement about listening True or False:

_____ People tend to pay attention to what interests them.

_____ Hearing and listening are the same.

_____ Most people have a short attention span and have trouble concentrating on the same thing for too long.

_____ The speaker is totally responsible for the success of communication.

_____ When a listener's emotional level is high, he or she will be an effective listener.

_____ Listening is a natural process.

_____ Listening is a skill.

_____ Listening requires little energy; it's "easy".

_____ Giving advice and telling the speaker what to do is not a listening skill.

_____ Speaking is a more important part of the communication process than listening.

4) List below 4 study techniques that help people learn more effectively:

____________________ ____________________

____________________ ____________________

5) Describing a persons behavior is more helpful than telling them what kind of a person you think they are. True False

6) When a person labels a behavior good or bad, right or wrong, they are using an "I-Message Approach" to communication. True False

7) Giving a person praise helps them work better. True False

8) Roleplaying is useful in training sessions. True False

9) The dictionary is considered a " power tool ". True False

10) Phonics skills are an important part of adult reading. True False

11) Name two types of dictionaries that are useful everyday.

____________________ ____________________

12) Name 2 components of a dictionary page.

____________________ ____________________

13) How many consonants are in the English alphabet? ____________________________

14) The letters **w** and **y** are: (circle one answer)

consonants vowels both consonants and vowels

15) Circle the words with the short **e** sound:

she verse fret Pete

bench these press wed

16) A person's attitude is an important part of the reading process. True False

17) Name two of the four major components of the Reading Process.

18) A person should always try to maintain the same reading speed no matter what they are reading. True False

19) Reading is learned only at an early age. True False

20) A person must read every word to be a "good" reader. True False

21) If you read very fast you should still try to remember everything you read. True False

22) Name three good reading habits.

23) One word can have several different meanings. True False

24) A homophone is a ______________________________

25) Asking a co-worker is an acceptable way to find out what a new technical word means? True False

26) What does CNC stand for?

27) What does SPC stand for?

28) Read the following:

Producing a quality product at a fair price is the goal of any manufacturing plant. Therefore, quality control must be an important aspect of TRW's process. Product quality can be controlled in two ways.

What is the main topic of this reading:

29) Define the following TRW terms:

Dresser

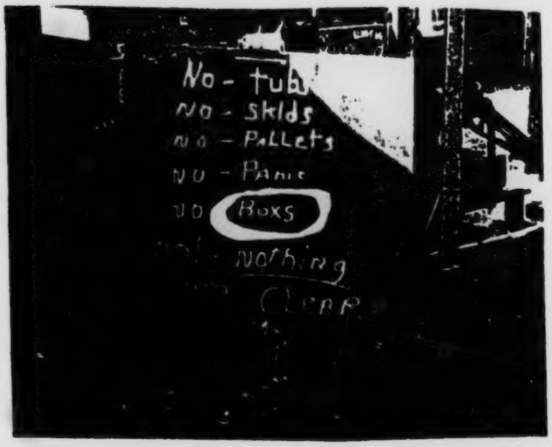
Shear

Collet

Tolerance

Process

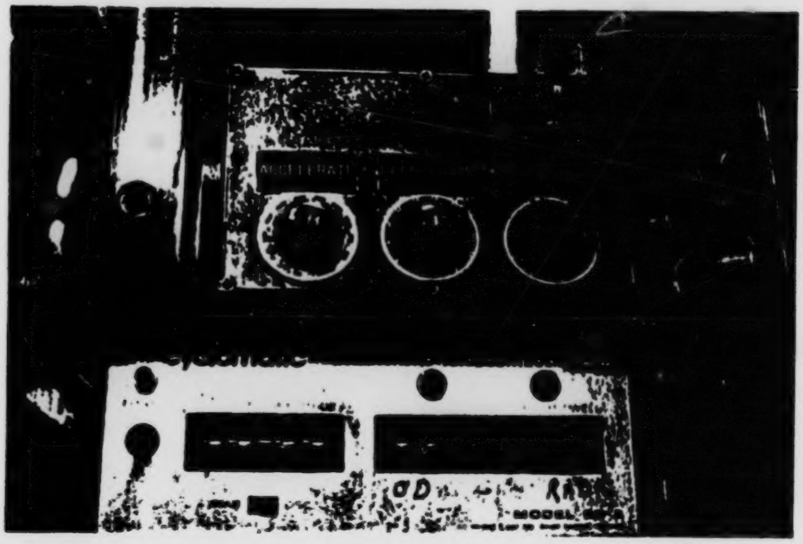
30) What is the proper spelling of the circled word on this sign.



---

31) If you wanted to make this go faster, which knob would you turn ? (circle one)

left center right

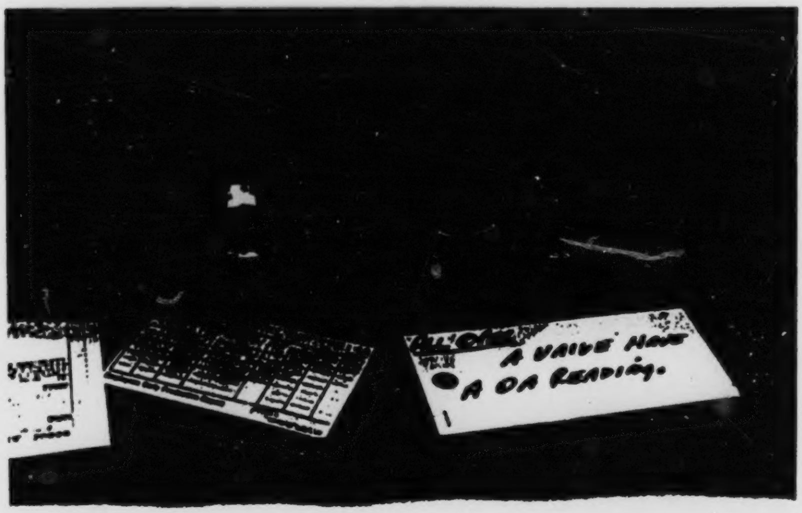


(OVER)

BEST COPY AVAILABLE

25) Is the verb in the sentence on the white ticket correct? Please write the correct verb on the line.

____



TRW COMMUNICATIONS ON THE JOB II

OBJECTIVES

SESSION 1

- Self-Awareness and Personal Learning Styles
- Pre-Assessment

COMMUNICATIONS ON THE JOB II
SESSION 1

THE TRAIN

What does "The Train" tell you about the power of your mind?

Have you heard of any other examples of people deciding something contrary to "fact" with dramatic results?

To what extent do you feel you control your attitudes? What circumstances do you feel take control away from you, and what would it take to get it back?

COMMUNICATIONS ON THE JOB II
SESSION 1

SOME REASONS WHY WE ASSUME WE CAN'T LEARN

- **Past Conditioning** - we were told we couldn't learn or that we weren't good at a particular subject or subjects.

- **Stereotypes** - How often have we heard statements like "He's a lathe operator, great mechanical ability, but his verbal skills aren't too good." or "She's wonderful at communicating with others, but technically, I don't think she has it"? In many cases, these statements reflect stereotypes present in our society and our companies. It's easy to buy into them, and create self-fulfilling prophecies so that we fit the stereotype.

- **Other People's Perceptions of Us** - Often, we're labelled, usually early in life. "He's the artist" or "She's the smart one" or "He has the mechanical mind." What happens is that we often get pigeon-holed. We also assume that we can only be good at what people tell us we're good at. Or conversely, we assume that we're poor at whatever people tell us we're poor at. We tend to live up (or down, as the case may be) to other people's expectations.

Other reasons why people assume they can't learn:

COMMUNICATIONS ON THE JOB II
SESSION 1

SUCCESSFUL LEARNING EXPERIENCE

Describe a recent successful learning experience.

Why did you want to learn this particular skill or task?

COMMUNICATIONS ON THE JOB II
SESSION 1

SOME MOTIVATING FACTORS

- **Money** - People will often learn new skills in order to gain a promotion or to get a new higher-paying job.
- **Comfort** - People are motivated to learn new skills if it will make their jobs easier.
- **Safety/Health** - If a skill is necessary to their safety or health, people usually view that skill as an important one to learn.
- **Status** - People will often learn new skills if they believe it will increase their status with their supervisor, their co-workers, and/or family and friends.

What factors motivate me?

COMMUNICATIONS ON THE JOB II
SESSION 1

PERSONAL LEARNING STYLES

- **Visual** - Learns best through observation or studying graphs or charts. If you feel you learn a lot from demonstrations or you like to look at graphs, drawings, charts, maps, etc. in order to understand something, you may be a visual learner.
- **Auditory** - Learns best through listening. If you get a lot from lectures or like to listen to educational audiotapes at home or in your car, chances are you're an auditory learner.
- **Kinesthetic** - Learns best through movement or while moving. If you like to walk around or knit or tinker while listening to educational material or if you feel you're pretty good at picking up new sports moves after just one or two tries, it's a good possibility that you're a kinesthetic learner.
- **Touch** - Learns best through touch or "hands-on" experience. If you're the type of person who wants to just start operating a piece of equipment, or who wants to touch or feel objects to get a better sense of them, you're most likely a touch learner.
- **Olfactory** - Learns best through smell or taste. If you often associate things with a particular smell or taste, you very well might be an olfactory learner.

PREFERRED LEARNING METHODS

- **Print/Individual** - Learns best through reading and writing. If you love to read and feel you learn a lot from manuals, magazines and books, you may be a print-oriented learner who likes to learn things on their own.
- **Interactive/Group** - Learns best through talking things out with other people. If you feel you learn a lot from small group discussions or by bouncing ideas off people, you may be an interactive learner.

COMMUNICATIONS ON THE JOB II
SESSION 1

WHAT KIND OF LEARNER AM I?

Learning Style Inventory

Check below the techniques through which you think you learn best.

___ 1. motion pictures
___ 2. lecture, information-giving
___ 3. group discussions
___ 4. reading assignments
___ 5. role playing with you as a participant
___ 6. project construction
___ 7. odor discrimination activities
___ 8. television programs
___ 9. audiotapes
___10. participant in panel discussion
___11. written reports
___12. nonverbal/body movements
___13. drawing, painting, or sculpting
___14. tasting
___ 15. slides
___ 16. records
___ 17. question-answer sessions
___ 18. independent reading
___ 19. physical motion activities
___ 20. model building
___ 21. scented materials (i.e., scratch & sniff)
___ 22. graphs, tables, and charts
___ 23. recitation by others
___ 24. interviews
___ 25. writing
___ 26. participant in physical games
___ 27. touching objects
___ 28. photographs

COMMUNICATIONS ON THE JOB II

SESSION 1

WHAT KIND OF LEARNER AM I?

Learning Style Inventory
Interpretation

Circle the numbers you checked on the Learning Style Inventory. Find the row where the most numbers are circled and identify the learning style to the right of it. Most likely, that's your dominant learning style. It is possible to have 2 learning styles with the same or almost the same number of circles. In that case, you probably utilize both learning styles equally well.

NUMBERS	LEARNING STYLE
1, 8, 15, 22, 28	VISUAL
2, 9, 16, 23	AUDITORY
3, 10, 17, 24	INTERACTIVE/GROUP
4, 11, 18, 25	PRINT/INDIVIDUAL
5, 12, 19, 26	KINESTHETIC
6, 13, 20, 27	TOUCH
7, 14, 21	OLFACTORY

COMMUNICATIONS ON THE JOB II
SESSION 1

LEARNING STYLES ACTIVITY

Tony works for the Excellent Products Company operating a drill press. Recently, his company automated all the drill presses in the plant. Tony, along with all the other drill press operators must now learn to operate the automatic controls. Tony has been running the drill press for 5 years. Because he feels that the automation will make him more productive and allow him to learn new skills, he's sure he can learn to work with the automatic control system. The big question, of course, is how?

Tony's supervisor, John, brings him a copy of the big, thick manual that came with the new machinery.

"Everything you need to know is right in there," says John. "Read it."

Tony tries to read it. But it seems boring to him. What he does find useful are the drawings and charts. After a week of trying to read the manual, Tony decides to talk to John.

"I could look at this manual from now till retirement and never learn what to do. I need someone to show me how to use this thing!"

John said he understood and the next day, he worked with Tony. John patiently explained everything he knew about the machine to Tony. Tony kept wanting to push the buttons and check out the information for himself. Sometimes, although Tony didn't admit it to John, he felt lost by John's explanations.

When he was done explaining everything to Tony, John asked him to repeat the steps for certain operations. Tony couldn't do it successfully. "Walk me through it," he kept saying.

"I just did," insisted John.

"Well, if I could just try it one time, then I think I'll be able to remember it better," said Tony.

"No," said John, "Until you learn what to do, we can't take a chance on damaging the new machinery."

John walked away rather exasperated. Tony was left feeling very frustrated. "If I could just watch someone operating one of these babies, then I could pick it up," he thought.

COMMUNICATIONS ON THE JOB II
SESSION 1

LEARNING STYLES ACTIVITY (cont'd)

The next day, Tony decided to take another route to learning the automated controls. He talked to some of the other drill press operators and found that one of the younger operators, Nancy, was skilled at operating automatic controls because of some vocational training.

Tony asked Nancy if he could watch her in action. "Sure," Nancy said.

That afternoon, Tony went over to Nancy's drill press. she first explained what she was going to do, then did it. Tony kept track of the buttons she pushed and in what order. "Can I try it?" he asked when she was done with the demonstration.

"Of course," said Nancy. "I'll cancel the program I just did and you can start from scratch."

"Thanks," said Tony. He approached the controls. He was amazed when he remembered practically the whole sequence of events. Nancy just had to prompt him a couple of times.

"See, nothing to it," said Nancy when he finished successfully.

"Yeah, nothing to it," said Tony. "Wonder why it seemed so hard yesterday?" he thought.

Every day for a week, Tony worked with Nancy until he had all the basic operations down. John came by and saw Tony operating the automatic controls with skill and ease. "Really dug into that manual, didn't you, Tony?" he said. "I was beginning to think you were a hopeless case. Good job."

What kind of learner is Tony? Is there more than one style you can identify for him?

What kind of learner do you think John is? What kinds of problems did this cause between John and Tony?

COMMUNICATIONS ON THE JOB II
SESSION 1

LEARNING EFFECTIVELY

In order to learn effectively, you must

- **Believe in yourself.**
- **Be motivated.**
- **Be aware of your personal learning style and take advantage of it, whenever possible.**

312

OBJECTIVES

SESSION 2

- Successful Learning Strategies
- Using the Dictionary

COMMUNICATIONS ON THE JOB II
SESSION 2

FOUR STUDY SKILLS TECHNIQUES TO HELP YOU LEARN MORE EFFECTIVELY

- Organization
- Concentration
- Notetaking
- Memory Improvement

COMMUNICATIONS ON THE JOB II
SESSION 2

ORGANIZATION

In order to be successful in this class (and others), it's important to:

- Set a goal
- Plan how to reach that goal
- Act upon your plans

COMMUNICATIONS ON THE JOB II
SESSION 2

PERSONAL COMMUNICATIONS GOALS

It's important to set personal goals for this course. Take a few minutes and write down a communications goal that you would like to accomplish in Communications on the Job.

MY PERSONAL COMMUNICATIONS GOAL IS:

COMMUNICATIONS ON THE JOB II
SESSION 2

WHAT IS CONCENTRATION?

Concentration is:

____

____

____

Consider the postage stamp. It secures success through its ability to stick to one thing until it gets there.

-- Josh Billings

COMMUNICATIONS ON THE JOB II

SESSION 2

CONCENTRATION ACTIVITY

Pat Hawkins is about 2 weeks into his training program. He's started with Basic Math, a subject he feels he's never been good at. His supervisor told him that Math skills will become more important as improvements to the equipment are made at work. But Pat feels that he's survived this long without math skills, why should he learn them now?

When Pat comes into the learning lab, he picks up the resources he needs, takes off his coat and wanders over to a workstation, thinking to himself, "Oh, here comes 2 hours of boredom. I'd rather be home, eating dinner with my family, or bowling with the guys."

After arranging his resources and notebooks, he decides he needs a cup of coffee. So, he goes to the coffee machine. In the dining room, a TV is on with the news. He watches the news for 10 or 15 minutes while he sips his coffee. On his way back to the learning lab, he thinks about the news events he just saw and wonders "what the world's coming to."

He goes back to his workstation, realizes he didn't bring a pen or pencil, so he goes into the office to get one. He chats for 5 minutes with one of the secretaries.

Then, he returns to the workstation and looks at his watch. A half hour has passed already. "Good," Pat thinks, "Only one and a half more hours of this." He works 2 or 3 problems. Then, he starts to think about the argument he and his wife had this morning. It's been bugging him all day. He knows he needs to talk to her again more calmly and rationally. He starts planning what he'll say to her.

Then, Pat realizes he's cold. He's only wearing a short-sleeved T-shirt. He rubs his arms and then gets up to get another cup of coffee. In the dining area, he sees one of his co-workers. They start talking about the day's events at work and how tough it is to work and go through this training at the same time. Pat glances at his watch. Only about 45 minutes left to study.

He goes back to his workstation. He reviews his notes and tries to go through the examples, but he keeps thinking about what he'll say to his wife when he gets home. He hits an example problem that makes no sense to him. After going over it a couple times, he looks at his watch. Only 15 minutes left.

"Well, I'm going to call it a day--this is a good stopping point," he says to himself and leaves. On his way out the door, he shakes his head and thinks, "It's going to take me forever to get through this Math class, 2 hours is hardly enough time."

COMMUNICATIONS ON THE JOB II
SESSION 2

WHAT BREAKS OUR CONCENTRATION?

- **EXTERNAL DISTRACTIONS**

  Some examples: uncomfortable chairs, lighting, noise

  OTHERS: ____

  ____

- **INTERNAL DISTRACTIONS**

  Some examples: personal problems, daydreaming

  OTHERS: ____

  ____

- **PHYSICAL FACTORS**

  Some examples: hunger, thirst, tiredness, illness

  OTHERS: ____

  ____

- **MENTAL FACTORS**

  Some examples: boredom, negative attitude

  OTHERS: ____

  ____

COMMUNICATIONS ON THE JOB II
SESSION 2

WAYS TO INCREASE CONCENTRATION

- Keep your goal in mind.
- Develop an interest in and a positive attitude about the material.
- Eliminate or minimize distractions beforehand.
- Think about successes you've had or success you're determined to have. Then, get to work.

CONCENTRATION HINT: You can will yourself to concentrate and then practice. Start by telling yourself to concentrate for just 5 minutes. Then you can gradually increase your concentration time. Soon, concentration will become a good habit.

What can Pat Hawkins do to change his study session?

____

____

____

COMMUNICATIONS ON THE JOB II

SESSION 2

CONCENTRATION ACTIVITY - GOOD MODEL

Pat Hawkins is about 2 weeks into his training program. He's started with Basic Math, a subject he feels he's never been good at. His supervisor told him that Math skills will become more important as improvements to the equipment are made at work. Even though Pat feels he's survived this long without math skills, he knows that more is going to be expected from him on the job when the new equipment is installed. He knows it's going to be a struggle, but on the way to the learning lab, he mentally prepares himself to learn and succeed at Basic Math.

Before he leaves work, Pat makes sure he has everything he needs - his notebook, a pencil and eraser, a snack of crackers, cheese and fruit, and a light sweater.

When he arrives at the learning lab, he takes off his coat and puts on the sweater. He takes his notebook to the dining area, eats his snack, has something to drink and goes over his notes from the last session, ignoring the news on the TV. As he walks back to the learning lab, he feels prepared. He checks out the resources he needs and goes to a workstation where he feels comfortable.

The argument that he had with his wife this morning comes into his mind. It's been bugging him all day. He tears off a piece of notebook paper and writes down what the argument was about and his solution, talk to her calmly and rationally. "I'll think about what I'm going to say in the car on the way home," he tells himself. Then, he gets down to business.

First, he reviews his notes, making sure to work through the example problems. There's one in particular that gives him some problems, so he marks it to ask the instructor about in the next class session.

Now, he's ready to tackle problems. He works through the problems in the first section of the software. Before starting the second section, though, he decides he needs a short break. He looks at his watch, about 45 minutes left, enough time for a 10-minute break.

CONCENTRATION ACTIVITY - GOOD MODEL (cont'd)

He goes into the dining area where he sees a co-worker. He chats with him about the day's work events but lets him know that he can't talk long because he wants to finish the next section before leaving today. The co-worker comments on his motivation and persistence. "It's hard," Pat tells him, "but I look at it as an opportunity. I don't know how all this will fit together with our jobs, but I think I'll be better prepared for the new equipment if I learn this now." Pat keeps track of the time and at the end of 10 minutes, he tells his co-worker he has to go.

He returns to the workstation and works the problems in the second section of the software. Walking out of the building, Pat has a sense of confidence in his ability to learn. And when he gets in the car, as promised, he starts thinking about what to say to his wife. He feels that he'll be able to work out the situation with her, now that he let it simmer in the back of his mind for a while and came to it fresh.

NOTETAKING TIPS

- **Listen actively** - Good listening skills are important for taking good notes.

- **Don't try to write down every word the instructor says** - Abbreviate when possible and summarize. The most valuable notes to you are the ones in your own words.

- **Be neat and organized** - After all, what good are a bunch of messy, sloppy words that you won't be able to understand later? On the other hand, don't get too hung up on neatness. A word crossed out here or there or an arrow or two is OK, as long as it's understandable.

- **Review your notes daily** - Preferably, review them right after class. Just a quick 5-10 minute review will help you to retain the material a lot longer.

COMMUNICATIONS ON THE JOB II
SESSION 2

NOTETAKING EXAMPLE

Vocabulary Words

Word	Pronunciation	Meaning	My sentence
Variable	Vâr ē e bel	Measurable quantities such as dimensions or weight	Two variables that I need to check are the diameter and thickness of the valve tip.
Probability	pröb e bil i tē	The chance that something will or will not happen	The probability of process problems increases when we use a new material for the first time.

NOTETAKING EXAMPLE

Using the Dictionary

Recall Words	Notes	Examples
Spelling	Spelling - entry word shows - sometimes more than 1 sp. - more common sp. given 1st.	theater or theatre
Plurals	Plurals - most nouns show by -s or -es - irregular plurals in dict. - shown by pl. before plural form	mouse - pl. mice

COMMUNICATIONS ON THE JOB II
SESSION 2

MEMORY IMPROVEMENT

Three Types of Memory

- Visual
- Auditory
- Kinesthetic

MY STRONGEST TYPE OF MEMORY IS:

____

____

____

____

COMMUNICATIONS ON THE JOB II
SESSION 2

GENERAL TIPS TO IMPROVE YOUR MEMORY

Interest -	It's much easier to remember information about what interest you.
Selection -	It's a lot easier to remember the important points made, rather than to try and remember all the details given.
Attention -	You need to give your full attention to something that you want to remember.
Understanding -	If you understand something, you'll remember it a lot easier.
Intention to - Remember	You need to tell yourself that you want or need to remember something.
Confidence -	Have a positive mental set -- see yourself as a person with a good memory.
Association -	Connect things in your mind.
Background of - Experience	You'll more easily remember new things about a topic if you already know something about that topic.
Organization -	Group things you have to remember in a logical fashion.
Practice -	The more you practice, the better your memory will be.

COMMUNICATIONS ON THE JOB II
SESSION 2

MEMORY SYSTEMS

- **Observation** - The more and better you observe or study something, the easier it will be to remember.
- **Visualizing/ Imaging** - Picturing something helps us to remember it better. Concrete items are easier to visualize than abstract ideas.
- **Association** - It's easier to remember new information when you associate it with something you already know.
- **Substitution** - Think of and picture a word or group of words that sound like or remind you of what you want to remember. This technique works well for abstract concepts.
- **Classification** - Divide items into logical groups. It's much easier to remember three or four groups of four to six items each than one large group of twenty to twenty-five items.
- **Mneumonics**- A self developed system, that will differ in each case, the learner devises a " mneumonic " to recall longer lists, words, etc.

COMMUNICATIONS ON THE JOB II

SESSION 2

MEMORY EXERCISE

Use the substitution technique to memorize the ten memory principles. Each is listed below with a space next to it for you to draw a picture or write a word which will help you remember each item. After you've completed your substitutions, take a few minutes to memorize, then flip this page over and surprise yourself at how well you remember the ten memory principles.

1. Interest ____________________

2. Selection ____________________

3. Attention ____________________

4. Understanding ____________________

5. Intention to Remember ____________________

6. Confidence ____________________

7. Association ____________________

8. Background of Experience ____________________

9. Organization ____________________

10. Practice ____________________

COMMUNICATIONS ON THE JOB II
SESSION 2

USING THE DICTIONARY

Keep a dictionary within easy reach

Practice alphabetical order

Two ways that might help:

If the word begins with b, look toward the front
If the word begins with m, look toward the middle
If the word begins with s, look toward the back of the dictionary

Another method groups the letters of the alphabet into sections:

1. A B C D E F G
2. H I J K
3. L M N O P
4. Q R S T U V
5. W X Y Z

Now practice picturing these sections in your mind. The next time you need to look something up in the dictionary, the phone book,the glossary of a manual, or a street name on a map, try to picture these sections.

COMMUNICATIONS ON THE JOB II
SESSION 2

PRACTICE
PUTTING WORDS IN ALPHABETICAL ORDER

Keep the alphabet and the techniques above in mind when alphabetizing words, names etc. Practice with putting words in order helps when finding a word quickly.

Alphabetize these TRW words.

valve ____________

idlers ____________

extrude ____________

chrome ____________

profile ____________

forge ____________

wheel ____________

blend ____________

gage ____________

angular ____________

shaved ____________

jam ____________

mike ____________

dresser ____________

taper ____________

hub ____________

COMMUNICATIONS ON THE JOB II
SESSION 2
PRACTICE

If words all begin with the same letter, then the second letter determines the alphabetical order.

Circle the letter or letters in the words that determine how these words were ordered:

" G" List

gage

generator

girder

girth

grind

grinder

groove

COMMUNICATIONS ON THE JOB II
SESSION 2

ACTIVITY 1 This activity will give some hints, techniques and practice with putting words or names in alphabetical order. Some people seem to have an easier time with this. It is a skill that can be reviewed and improved.

Alphabetize a set of TRW Employees Daily Production Reports.

HINT: Separate (and alphabetize) these names in groups then rearrange them in alphabetical order.

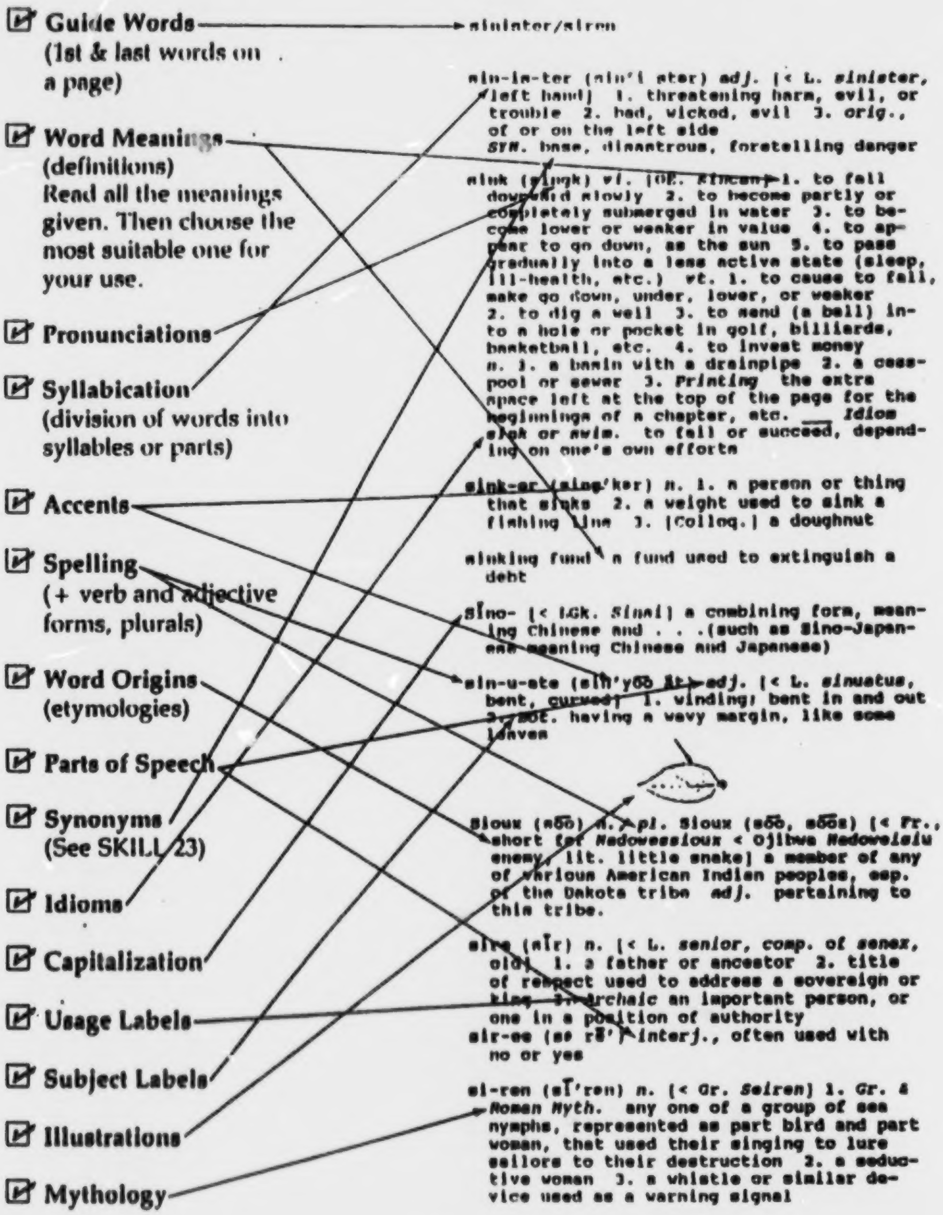
Example:
- Names beginning with " Robb"
- Names beginning with " Robert"
- Names beginning with " Robi"
- Names beginning with "Rod" and so on...

COMMUNICATIONS ON THE JOB II
SESSION 2

SKILL 16: POWERHOUSE, POWER TOOL

The Dictionary

15 Ways a Dictionary Can *Energize* Your Reading



- ☑ **Guide Words** (1st & last words on a page)
- ☑ **Word Meanings** (definitions) Read all the meanings given. Then choose the most suitable one for your use.
- ☑ **Pronunciations**
- ☑ **Syllabication** (division of words into syllables or parts)
- ☑ **Accents**
- ☑ **Spelling** (+ verb and adjective forms, plurals)
- ☑ **Word Origins** (etymologies)
- ☑ **Parts of Speech**
- ☑ **Synonyms** (See SKILL 23)
- ☑ **Idioms**
- ☑ **Capitalization**
- ☑ **Usage Labels**
- ☑ **Subject Labels**
- ☑ **Illustrations**
- ☑ **Mythology**

sinister/siren

sin-is-ter (sin'i ster) *adj.* [< L. *sinister,* left hand] 1. threatening harm, evil, or trouble 2. bad, wicked, evil 3. *orig.,* of or on the left side
SYN. base, disastrous, foretelling danger

sink (siŋk) *vi.* [OE. *sincan*] 1. to fall downward slowly 2. to become partly or completely submerged in water 3. to become lower or weaker in value 4. to appear to go down, as the sun 5. to pass gradually into a less active state (sleep, ill-health, etc.) *vt.* 1. to cause to fall, make go down, under, lower, or weaker 2. to dig a well 3. to send (a ball) into a hole or pocket in golf, billiards, basketball, etc. 4. to invest money *n.* 1. a basin with a drainpipe 2. a cesspool or sewer 3. *Printing* the extra space left at the top of the page for the beginnings of a chapter, etc. ___ *Idiom* *sink or swim.* to fail or succeed, depending on one's own efforts

sink-er (siŋ'ker) *n.* 1. a person or thing that sinks 2. a weight used to sink a fishing line 3. [Colloq.] a doughnut

sinking fund a fund used to extinguish a debt

Sino- [< LGk. *Sinai*] a combining form, meaning Chinese and . . .(such as Sino-Japanese meaning Chinese and Japanese)

sin-u-ate (sin'yo͞o āt) *adj.* [< L. *sinuatus,* bent, curved] 1. winding; bent in and out 2. *Bot.* having a wavy margin, like some leaves

Sioux (so͞o) *n., pl.* Sioux (so͞o, so͞oz) [< Fr., short for *Nadowessioux* < Ojibwa *Nadoweisiw* enemy, lit. little snake] a member of any of various American Indian peoples, esp. of the Dakota tribe *adj.* pertaining to this tribe.

sire (sīr) *n.* [< L. *senior, comp. of senex,* old] 1. a father or ancestor 2. title of respect used to address a sovereign or king 3. *Archaic* an important person, or one in a position of authority

sir-ee (sə rē') *interj.,* often used with no or yes

si-ren (sī'ren) *n.* [< Gr. *Seiren*] 1. *Gr. & Roman Myth.* any one of a group of sea nymphs, represented as part bird and part woman, that used their singing to lure sailors to their destruction 2. a seductive woman 3. a whistle or similar device used as a warning signal

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB II
SESSION 2

Choose the right dictionary for the task

Types of dictionaries

1)____

2)____

3)____

4)____

5)____

OBJECTIVES

SESSION 3

- The Process and Types of Reading
- Active and Passive Reading
- Skimming and Scanning
- Technical Vocabulary Building System

COMMUNICATIONS ON THE JOB II
SESSION 3

Active Reading

What is it?

Questions asked by the reader.

Passive Reading

What is it?

Why do people read passively?

COMMUNICATIONS ON THE JOB II
SESSION 3

THE READING PROCESS

THE 4 COMPONENTS OF READING

Define:

Vocabulary

Comprehension

Speed

Concentration

ACTIVITY 1 Take an inventory of your reading skills !

COMMUNICATIONS ON THE JOB II
SESSION 3

ACTIVITY 1

READING SKILL INVENTORY

Consider the four areas of reading we have discussed:

VOCABULARY COMPREHENSION SPEED CONCENTRATION

Which is the area in which you have the most strength?

____

____

____

The most important area of my reading that I feel needs improving is:

____

____

____

The area of my reading that I would most like to improve is:

____

____

____

This course will give participants an overview of strategies to improve these skills especially on the job. Many different courses exist to focus on improving your reading skills. Write down a goal for improving your reading in the near future.

____

____

____

COMMUNICATIONS ON THE JOB II
SESSION 3

Reading Skills

Is reading important to your job?

A positive attitude

Personal goals

COMMUNICATIONS ON THE JOB II
SESSION 3

Different Reading Rates

Study speed

"Normal" speed

Skimming and Scanning

Stages of Reading

Learning to Read

Stage 1

____

____

Stage 2

____

____

Reading to Learn

Stage 3

____

____

COMMUNICATIONS ON THE JOB II
SESSION 3

"Good" Reading Habits

Concentration

Setting a Purpose

Setting a context

COMMUNICATIONS ON THE JOB II
SESSION 3

RAPID READING

1. Understand why it's important to read rapidly.

2. Recognize rapid reading as a selective process.

3. Understand when to use each of the two rapid reading methods.

4. Understand how to use each of the two rapid reading methods.

TWO METHODS OF RAPID READING

1. SKIMMING

2. SCANNING

COMMUNICATIONS ON THE JOB II
SESSION 3

SKIMMING AND SCANNING

SKIMMING

WHEN you are required to determine the main idea through attention to signals the writer uses. Use these techniques when skimming.

HOW

- Note titles and subtitles
- Read introduction and conclusion
- Read boldface type and italics
- Look at illustrations, charts, graphs and figures

SCANNING

WHEN you are required to locate specific detail mixed in with many other details. Use these techniques when scanning.

HOW

- Read down the page (rather than across)
- Using a reading aid, such as a bookmark, to help keep your place if you need it
- Read table of contents and index to locate **general** information areas
- Read section and column headings to locate **specific** information areas

TRY IT! **SCANNING DRILLS**

COMMUNICATIONS ON THE JOB II
SESSION 3

According to the chart below, what taxable investment is equivalent to a 5.50% tax-exempt bond, for the $16,000 to $20,000 bracket?

Equivalent taxable and tax-exempt yields, by income bracket

If your net taxable income (joint return) is...		$8.000 to $12.000	$12.000 to $16.000	$16.000 to $20.000	$20.000 to $24.000
a tax exempt bond paying...	is equivalent to a taxable investment paying...				
4.00%		5.27%	5.52%	5.78%	6.17%
4.25%		5.61%	5.86%	6.14%	6.56%
4.50%		5.94%	6.21%	6.50%	6.94%
4.75%		6.27%	6.55%	6.86%	7.33%
5.00%		6.60%	6.90%	7.23%	7.72%
5.25%		6.93%	7.24%	7.58%	8.10%
5.50%		7.26%	7.59%	7.95%	8.49%
5.75%		7.59%	7.93%	8.31%	8.87%
6.00%		7.92%	8.27%	8.67%	9.26%
6.25%		8.25%	8.62%	9.03%	9.64%
6.50%		8.57%	8.96%	9.39%	10.03%

Data: J. B. Hanauer & Co

Answer: seven and ninety-five one hundredths per cent

COMMUNICATIONS ON THE JOB II
SESSION 3

According to the index sample below, on what page of the book would you find a discussion of the uses of polyethylene?

Parity, law of, disproven, 47
Particle accelerators. *See* Atom-smashers
Particle theory of matter, 12, 125-126
Particles. *See* Atomic particles
Pascal, Blaise, 54, 56, 76
Pauli, Wolfgang, 125
Peking man, 12
Perey, Marguerite, 129
Perier, Florin, 54
Periodic table of elements, 36-38, 124, *127*
Petroleum, 73
Phenolics, 112
Philosopher's Stone, 15, 19, *21*, 26
Phlogiston theory, *cartoon* 31, 32-33
Phosphates, 140
Phosphorus, 26, 30, *140*; white, discovery of, *28*, 32
Photon, *154*; creation and decay of, *155*
Physics, modern specialties, 10, 41; education and careers, 41, 48
Pi mesons, *diagram* 154, 156. *See also* Pion
Pictet, Raoul, 59
Pile, nuclear, 173
Pion (pi-meson), 156, *157*
Pitchblende (uranium ore), *8*, 120, 141
Planck, Max, 124
Plasma particles, 176; controlled fusion of, as potential power source, 10-11, 177-178; fusion of, *diagram* 174, *176-177*, 177; generation of electricity, 179; in nature, 45, 176; possible confinement of, 11, 45, *diagram* 178, 179; record temperatures achieved, 11
Plasma state of matter, 10, 45, 176, 179
Plastics, 108, 175; production, *110-111*, 114, *115*; raw materials for, 112; uses of, *112-113*, *116*
Platinum, 134, *135*, 143; uses of, 135
Plutonium, 126, *148*; high fissionability, *172-173*, 174
Pneumatic air hammer, *diagram* 54
Polarization, 74
Polonium, 140, *141*; discovery of, 120, 141; radioactivity, *diagram* 120, 141
Polonium 212, half life, 170
Polyesters, 112
Polyethylene: production, *115*; uses of, *113*
Polyfluorocarbons, 112
Polymerization, 108, *110-111*, 112
Polymers, 107-108, 111, 112
Polyolefins: raw materials for, 112; uses of, *112*
Polystyrenes: production of, *110-111*; raw materials for, 112
Polyurethanes: raw materials for, 112; uses of, *113*
Polyvinyl chloride: production of, *110-111*; uses of, *113*
Positron, 154-155, *diagram* 154; creation of, *155*
Potash, 129. *See also* Potassium
Potassium, 36, 128, *129*; radioactivity, 129
Potassium aluminum sulphate. *See* Alum
Powell, C. F., 156
Praseodymium, *147*
Prehistoric man, acquaintance with and use of matter, 12, 30, 134, 137; bronze, *10*; minerals, 12, 13; transformations of matter, 13
Pressure cooking, 80, *81*
Pretiosa Margarita Novella, *12*
Priestley, Joseph, *cartoon* 31, 33, 56
Principia, Newton, 30, 75
Principles of Chemistry, Mendeleyev, 36
"Probability" waves, 158
Promethium, 37, 146; oxide, *146*
Protactinium, 148; oxide, *148*
Protium, *153*
Proton(s), 10, 12, 16, 151, *154*; bombardment of atoms with, 161-162, *163-164*; charge, 152; determine atomic numbers of elements, 38, 126; held by nuclear force, 155-156, *157*, 170
Pupin, Michael, 180

Answer: page one hundred thirteen

COMMUNICATIONS ON THE JOB II
SESSION 3

Fallacies about Reading

Become

Facts about Reading

Discuss responses and where these fallacies come from. Did the information in this session help turn these fallacies into facts?

Reading is learned only at an early age? True False

You should read all material in the same way? True False

A person has to read every word to be "GOOD" reader? True False

JOB RELATED VOCABULARY IMPROVEMENT

Building job related vocabulary starts with words that you already know. Words and terms used on the job may look like words you use outside of work everyday.

That's important to remember. Start by thinking of the definition that you have used outside of the job. Then think of the way you have either read or seen the word at work. This will also give you a clue to it's job related meaning.

Use your new and tuned up dictionary skills. You probably have a "regular" dictionary on hand. Look the word up there. Review the definitions given. Separate the everyday uses from any that may be close to your job related use of this word. You need to be creative in finding the way the definitions fit. This dictionary may not reveal a definition that is job related. That will tell you that your word has a special technical meaning.

This dictionary may not reveal the job related definition of your word. You now need to find a new source for definitions. Let's take a look at some possibilities. Could you find a Technical Dictionary? Would a manual with a glossary help? What about asking a "seasoned" co-worker? Take a few moments to discuss these methods with the class. Rank them in the order that the class thinks would help find the most correct definition.

1. ____

2. ____

3. ____

Discuss what is good and bad about each method:

____

____

____

COMMUNICATIONS ON THE JOB II

SESSION 3

OVERVIEW OF JOB VOCABULARY WORD SEARCH

Steps in review:

1. Think of "regular" use
2. Look up the "regular" definition
3. Find:
   a. job related dictionary
   b. manual with glossary
   c. co-worker with the definition

CLASS ACTIVITY

Do Steps 1 & 2 and write down definitions for the following words. Use the space below.

Plant 1 ______________________________

2 ______________________________

Valve 1 ______________________________

2 ______________________________

Jam 1 ______________________________

2 ______________________________

Mean 1 ______________________________

2 ______________________________

You will continue on to the next steps with your assignment! GOOD LUCK!!

OBJECTIVES

SESSION 4

- Homophones and Homographs
- Previewing
- Job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB II
SESSION 4

HOMOPHONES

Define: ____

____

EXAMPLES: To review the spelling and meanings of these homophones.

- **aloud**=with the voice
- **allowed**=permitted

- **board**=a flat piece of wood; a group of administrators
- **bored**=tired of a dull activity

- **billed**=charged
- **build**=construct

- **cite**=to summon to appear in court; to quote or refer to a passage
- **sight**=act of seeing
- **site**=place

- **close**=shut
- **clothes**=dress

- **complement**=something that completes
- **compliment**=expression of courtesy

- **descent**=downward motion; ancestry
- **dissent**=disagreement

- **lean**=to bend the body or rely on another
- **lien**=acclaim on property as security against payment of a debt
- **naval**=related to ships, the navy
- **navel**=depression in the middle of the stomach from the umbilical cord

- **pore**=opening
- **pour**=cause liquid to flow

COMMUNICATIONS ON THE JOB II
SESSION 4

- **pride=**self-esteem
- **pried=**showed inquisitiveness; moved with a lever

- **principal=**a main person or thing
- **principle=**basic truth or rule of conduct

- **soar=**rise high
- **sore=**painful, tender

- **stationary=**not moving
- **stationery=**writing materials

- **their=**belonging to or done by them
- **there=**place
- **they're=**contraction of they are

- **threw=**tossed
- **through=**in one side and out the other

NOTE: Don't confuse through with thorough, which means complete!

- **to=**in a direction toward
- **too=**also; more than enough
- **two=**the second number

- **vial=**bottle
- **vile=**wicked
- **viol=**musical (stringed) instrument

IMPROVE YOUR READING: IMPROVE YOUR JOB by Jeanne M. Miller

COMMUNICATIONS ON THE JOB II
SESSION 4

ACTIVITY 1

Use the review list of homophones to fill in the blanks with the correct words to complete these sentences.

1. The new drapes will__________the conference room.
2. The future__________of the firm's headquarters is still undetermined.
3. The__________of racial equality will be fostered in this workplace at all times.
4. The lab technician will now__________the serum into the__________.
5. Worker__________over relocating was reducing the department's morale.
6. The sales assistants promptly ordered__________new________from Office Supply.
7. The bank was forced to put a__________on the company's new parking structure.
8. Each month I will__________examples of employee innovation in the company newsletter.
9. Produce prices will__________because of the Florida freeze.
10. He__________the department $300 for the copy paper.

COMMUNICATIONS ON THE JOB II
SESSION 4

HOMOGRAPHS

Breaking down the word Homograph can help to explain it's meaning.

Define: ______________________________

EXAMPLE: A tear you shed over a tear in your shirt is a good example.

There are basically three types of homographs.

1) Some homographs are not related at all in meanings:

bǎss= a type of fish
bāss= the lowest singing voice or musical instrument.

- These tend to be Anglo-Saxon in origin and one syllable in length.

Other Examples: ______________________________

____

2) Others are distantly related by root words but have diverged in meaning:

de'sert= dry, barren land
desert'= abandon

Other Examples: ______________________________

____

3) The majority of homographs have the same basic meaning but are pronounced differently. The syllable stress may vary or the vowel sound may change. Their use as parts of speech may also vary.

rēad= to process written words
rĕad= past tense of read

Other Examples: ______________________________

____

COMMUNICATIONS ON THE JOB II
SESSION 4

PREVIEWING

What is previewing?

____

____

Previewing gives a:

1) ____

____

2) ____

____

3) ____

____

Why Preview?

1) ____

____

2) ____

____

3) ____

____

4) ____

____

HOW TO PREVIEW

- Articles

  Read title

  Read headings if there are any.

  Read first several paragraphs.

  Quickly read the first sentence of each of the remaining paragraphs

  Read final few paragraphs.

ACTIVITY 6 **Handout: SPC Article**

COMMUNICATIONS ON THE JOB II
SESSION 4

HOW TO PREVIEW

- Chapters
  - Read title
  - Read headings and sub headings
  - Look for and read:
  - Objectives
  - Introduction
  - Summary

ACTIVITY 7 Text Books

COMMUNICATIONS ON THE JOB II
SESSION 4

HOW TO PREVIEW

* Manuals

Skim preface or introductory section

Look over Table of Contents

ACTIVITY 8 TRW Manuals

COMMUNICATIONS ON THE JOB II
SESSION 4

VOCABULARY # 1

Shear

Gage

Burrs

Taper

Blend

Chrome

Forge

TRW COMMUNICATIONS ON THE JOB II

OBJECTIVES

SESSION 5

- Prefixes and Suffixes, Synonyms and Antonyms
- Identifying Main Ideas, Topics, and Details
- Job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB II
SESSION 5

WORD STRUCTURE

Word parts defined:

prefixes ____

____

roots ____

____

suffixes ____

____

ROOTS

The parts of words that were just presented are important keys to discovering the meanings of words. The root is the only essential part of any word. If the other parts can be removed, they are most likely prefixes or suffixes. As was pointed out before, those word parts cannot stand alone. Because the English language is made up of root words from other languages, such as Greek and Latin, the root word that ends up standing alone may not actually make sense unless it's derivation is understood.

The easiest way to understand roots is to see them and review their meanings. The following roots and their meanings can provide participants with the keys to unlock the meanings of many words, even in more difficult and technical readings.

WORD PART	MEANING	EXAMPLE	YOUR EXAMPLE
audi	to hear	audio	
auto	self	automobile	
bio	life	biology	
cide	to kill	pesticide	
cred	to believe	credit	
dic	to speak; tell; say	dictate	
duc	lead; make; shape	reproduce	
cap	take or seize; hold	capacity	
(capt)		captive	
fac	do, make	facsimile	
fer	bear or carry	transfer	
graph	write	paragraph	
logos	speech or science	prologue	

COMMUNICATIONS ON THE JOB II
SESSION 5

(ology)	study of	microbiology	________
luc	light; shine	translucent	________
		luminous	________
miss	send	dismiss	________
(mit)		remit	________
path	suffering; emotions	pathetic	________
phobia	fear	zoophobia	________
phono	sound	megaphone	________
port	carry	portable	________
scribe	write	scribble	________
(script)		Scripture	________
spec	look	spectator	________
vers	turn	conversion	________
vita	life	vitality	________
(viv)		vivify	________

PREFIXES

This section will explore only some of the most common prefixes.

Some prefixes have only one meaning while others may have multiple meanings.

Prefixes that always mean **NOT**:

____

______ acid ______ sense
______ drinker ______ smoker
______ union ______ fat

____

______ coated ______ protected
______ approved ______ accepted
______ finished ______ ordered

In some dictionaries these words will not be defined because the meanings are simply a sum of the prefix and the root word.

HANDOUT Prefixes in the Dictionary

Prefixes that mean **NOT** but have more than one meaning:

________ = NOT in these words:

______ trust ______ honest
______ like ______ similar

________ = LACK OF/ OR OPPOSITE OF

______ respect ______ favor
______ regard ______ array

COMMUNICATIONS ON THE JOB II
SESSION 5

ACTIVITY 1

Look at the list of words. Think about what each word means. Circle each word in which **DIS** means **LACK OF OR OPPOSITE OF:**

1) discomfort
2) disallow
3) disadvantage
4) disarm
5) disobey
6) disagree
7) disassemble
8) disrobe
9) dismount
10) disorder

COMMUNICATIONS ON THE JOB II
SESSION 5

Other multiple meaning Prefixes:

IN = _____

_____ active   _____ direct
_____ complete   _____ sane

IN = _____ or _____

_____ lay   _____ scribe
_____ close   _____ sert

_____ **= IM** When it comes before b, m, and p. It has the same two meanings as _____ .

IM = _____   _____ pure   _____ mortal

IM = _____ or _____   _____ bed   _____ press

_____ = **WRONG OR WRONGLY / OR BAD OR BADLY**

_____ **spell** = **spell wrong**
_____ **rule** = **rule badly**
_____ **inform** = **give wrong information**

_____ = **ANEW / AGAIN / BACK**

_____ invest   _____ sale
_____ bore   _____ chrome

COMMUNICATIONS ON THE JOB II
SESSION 5

Other Prefixes and their meanings:

_____ = **BETWEEN**

_____ departmental
_____ scholastic

_____ = **WITHIN**

_____ mural
_____ state

_____ = **OUT FROM, AWAY**

_____ cise
_____ port
_____ wife

_____ = **OVER OR ABOVE NORMAL**

_____ active
_____ critical

_____ = **BEFORE**

_____ cooked
_____ fix !!!

OTHERS: ____

____

____

____

____

COMMUNICATIONS ON THE JOB II
SESSION 5

SUFFIX	ADDED TO	MAKES	MEANS
________	noun	________	without something help ______ top ______
________	________	adjective	somewhat like something fool ______ boy ______
________ ________ ________	noun	________	full of help ______ pour ______ smoke ______
________	________	adverb	like a something ghost ______ precise ______
________ ________ ________ ________	verb	________	state of being something employ ______ revis ______

COMMUNICATIONS ON THE JOB II
SESSION 5

SYNONYMS

Define: ______________________________

____

What do synonyms do for our language ?

1) ______________________________

2) ______________________________

3) ______________________________

Common synonyms:

____

____

____

modify=change
automobile=car
measure=gauge
cast=form
plant=factory
work=labor

Sources for finding synonyms:

1) ______________________________

2) ______________________________

PRACTICE: Use thesaurus to find other work related synonyms:

____

COMMUNICATIONS ON THE JOB II
SESSION 5

ANTONYMS

Define:

EXAMPLES:

Others:

succeed - fail
help - hinder
specific-general

erratic - regular
usable- scrap
revenue- expenses

PRACTICE: Use dictionaries to find antonyms.

COMMUNICATIONS ON THE JOB II
SESSION 5

Non- Fiction Structure

What is non-fiction (circle one) fantasy or fact?

Activity 1

Topic

Define:

Questions to ask:

Activity 2

COMMUNICATIONS ON THE JOB II
SESSION 5

ACTIVITY 1

Each person read the following and then discuss the questions with the group.

Nevertheless, saving is primarily done by an entirely different group: by individuals, by families, by households. An individual may wish to save for a great variety of reasons: to provide for his old age or for a future expenditure (a vacation or an automobile). Or he may feel insecure and wish to guard against a rainy day. Or he may wish to leave an estate to his children. Or he may be an eighty-year old miser who enjoys the act of accumulating wealth for its own sake. Or he may already have signed himself up to a savings program because an insurance salesman was persuasive. Or he may desire the power that greater wealth brings. Or thrift may simply be a habit, almost a conditioned reflex, whose origin he does not himself know.

What is the general topic of this reading selection?

A more specific topic might be:

ACTIVITY 2

DIAL INDICATORS

The principle of direct reading form a pointer and a graduated dial delivers the accuracy and speed needed in our plant's inspection and manufacturing operations. The dial indicator is used on all types of special and standard gaging equipment. Some dial indicators are direct reading and others serve as comparators showing plus or minus variations in size.

A dial indicator by itself can do nothing. It must be mounted and set properly before it can be used in checking or measuring work.

The specific topic is:

____

____

COMMUNICATIONS ON THE JOB II
SESSION 5

Main Thought

Define:

____

____

____

Where is the main thought?

____

____

____

Activity 3 **Finding specific topics and main thoughts**

Activity 4 **Finding specific topics and main thoughts**

ACTIVITY 3

COMMON AND SPECIAL CAUSES

Dr. Walter Shewhart of The Bell Laboratories, while studying process data in the 1920's, first made the distinction between controlled and uncontrolled variation, due to what we call common and special causes. He developed a simple but powerful tool to dynamically separate the two - The Control Chart. Since that time, Control Charts have been used successfully in a wide variety of process control situations, both in the U.S. and other countries - notably Japan.

Several types of control charts have been developed to analyze both variables and attributes. However, all control charts have the same two primary functions and are prepared and analyzed according to the same basic outline. The two functions are:

- To signal the presence of special causes of variation so that corrective action can be taken to bring the process into a state of statistical control.
- To give evidence whether a process has been operating in a state of statistical control so that a meaningful assessment of its capability to meet engineering specifications can be made.

The specific topic is:

____

____

The main thought is:

____

____

COMMUNICATIONS ON THE JOB II

SESSION 5

ACTIVITY 4

The main responsibility of a floor inspector is to perform quality audits and to keep records. The inspector's duties vary greatly in certain areas. Valve lines and automation are generally about the same. Duties in rotocaps, caps, heat treat, forge shop and weld lab vary greatly due to either product line or procedures exclusive to that area.

All floor inspectors must have a very good knowledge of customer quality acceptance standards, customer visual defect acceptance standards, use and set up of all types of gages and use of Rockwell hardness testers. Certain areas require the use of visual pyrometers, link testers, Rimacs, Brinell scopes, optical comparators, micrometers, calipers and microscopes. A floor inspector must have a good working knowledge of blueprints, routings, gage layouts and heat treat abstract procedure.

A floor inspector is required to make decisions on the acceptability of parts slightly out-of-print or with visual defects. He must be familiar with the acceptable variation that a given customer will accept and, if questionable, to consult with his supervisor on disposition.

A floor inspector is responsible for disposal of any scrap parts on his lines. He utilizes locked scrap tubs for each VMS of steel and must keep records of the number of scrap parts for each FR. He must also determine the department or operation causing the scrap and using a code for location and defect, enter it into the computer.

The floor inspector thus ensures that parts leaving his lines will meet acceptable quality standards, both visually and dimensionally. He also keeps records of audits performed and ensures that parts not meeting these standards are either repaired or sorted and unacceptable parts scrapped.

The specific topic is: ______________________

____

____

The main thought is: ______________________

____

____

____

____

COMMUNICATIONS ON THE JOB II
SESSION 5

Details

What are details ?

____

____

____

Answer these questions:

____

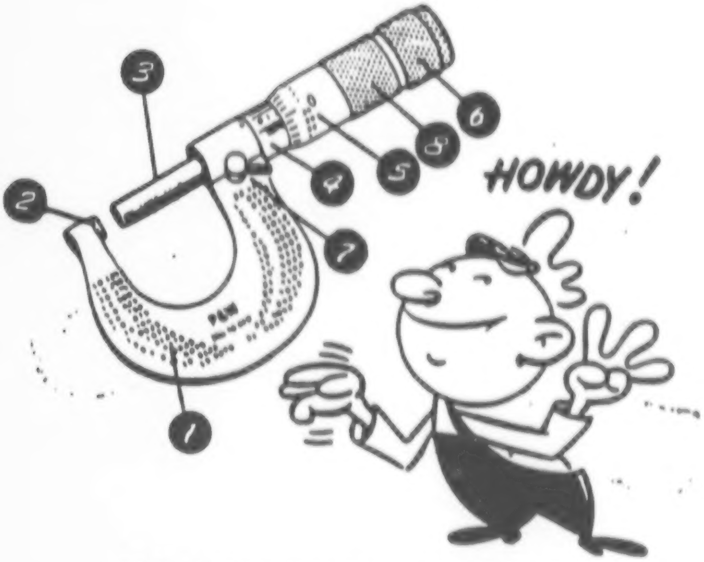
____

____

Activity 5 Finding specific topic, main thought and details

COMMUNICATIONS ON THE JOB II
SESSION 5

ACTIVITY 5



GET ACQUAINTED WITH IT!

So that you can meet the most essential parts of a "Mike" and know them by their right names, as we refer to them later, we've numbered the different parts as illustrated above.

The FRAME (1) is the foundation on which the micrometer is built. The ANVIL (2) is set in the Frame and is one of the contact faces for taking measurements. The end of the SPINDLE (3) is the other measuring face. The SPINDLE (3) is threaded in the HUB (4) permitting it to be turned to or from the part being measured. The THIMBLE (5) is fastened on the SPINDLE (3) and securely held by the RATCHET CAP (6). The RATCHET CAP (6) permits a uniform pressure in taking readings. The CAM LOCK (7) holds SPINDLE (3) at any desired measuring position.

Please answer the questions on the next page

COMMUNICATIONS ON THE JOB II
SESSION 5

ACTIVITY 5

The specific topic is:

____

____

The main thought is:

____

____

____

The specific details are:

1.____

2.____

3.____

4.____

5.____

6.____

7.____

COMMUNICATIONS ON THE JOB II
SESSION 5

VOCABULARY # 2

Profile ______________________________

____

Barrel ______________________________

____

Rotary ______________________________

____

Plating ______________________________

____

Dresser ______________________________

____

Exhaust ______________________________

____

Clutch ______________________________

____

OBJECTIVES

SESSION 6

- Following Instructions, Drawing Logical Conclusions
- Reading and Writing: Memos, Processes and Procedures
- Job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB II
SESSION 6

FOLLOWING INSTRUCTIONS

THE OLD ADAGE ABOUT FOLLOWING THE INSTRUCTIONS

____

____

WHY FOLLOW INSTRUCTIONS?

REASONS	EXAMPLES
____________________	____________________
____________________	____________________
____________________	____________________
____________________	____________________
____________________	____________________

TECHNICAL INSTRUCTIONS:

____

____

____

____

____

COMMUNICATIONS ON THE JOB II
SESSION 6

STEPS TO SIMPLIFY INSTRUCTIONS

Instructions may be written in an orderly easy to read format. These usually include numbers, a logical sequence and easy to understand language.

Example:

1. Complete all information on form.
2. Sign and date form.
3. Mail form to this address ______, in envelope provided.

The form may end up being impossible but the directions are clear.

In most cases the order in which the steps are preformed is very important. What if step 3 above was performed before steps 1 or 2 ?

Often a routine task, especially at work, becomes so automatic that the steps are hard to explain. When you think of the steps of a procedure, explain and order the steps as if you were guiding a person who had never done the task. Keep their safety in mind!

ACTIVITY 1 The next set of instructions needs to be placed in the proper order. Give it a try.

COMMUNICATIONS ON THE JOB II
SESSION 6

ACTIVITY 1

Place these instructions in the proper order. Fill in the correct number of each step 1-8 in the blank.

TO CHANGE A LIGHT BULB TO A HIGHER WATTAGE:

_____ Take higher wattage bulb and place into the socket.

_____ Turn on power to socket.

_____ Gently hold bulb and unscrew in counter clockwise motion.

_____ Obtain higher watt bulb.

_____ Place old bulb in a safe place

_____ Leave power to socket off.

_____ Hold bulb gently and screw clockwise into the socket until tight.

_____ If old bulb is still lit, turn it off and let it cool. Don't touch hot bulb!

COMMUNICATIONS ON THE JOB II
SESSION 6

STEPS TO SIMPLIFY INSTRUCTIONS (CONT'D)

So far we have looked at instructions that have easy to identify steps. Instructions also come written in paragraph form. These can look very confusing and overwhelming at first. Any set of instructions can be reworked to make them easier to follow. You may already have a method that comes in handy. It may almost be an automatic thinking process.

Here is a method that separates instructions into manageable parts. This method combines the memory systems of association and classification that were presented earlier in this course. It also presents the word **PRAISE** as a mnemonic or memory assisting device. The word PRAISE helps you remember the steps in order. It also reminds you to give yourself credit or **PRAISE** after you successfully use this method.

1) **P** ositive, confident attitude toward being able to accomplish this new or different task or set of instructions. Give yourself credit for past accomplishments.

2) **R** ead all of the instructions before beginning any of them. This gives you the whole picture before bolting headlong into one step.

3) **A** sk yourself and be able to answer

   What do I need to accomplish? What am I being asked to do here?
   What is the desired result or finished product?
   Why is it important?

4) **I** dentify words that are new, technical or unfamiliar. Use your new and improved dictionary skills.

5) **S** pecial equipment needed? Gather any:

   - equipment (calculator, gloves, cart)
   - materials (procedure manuals, blueprints, batch ticket)
   - information (specifications, computer printouts)

   needed to perform the task.

6) **E** asy action words singled out that are used in the instructions. Give them special attention. These will be red flag words signaling **ACTIONS** to take!

   Example: **load** the case.
   insert the cutting tool.
   record the weight.

COMMUNICATIONS ON THE JOB II
SESSION 6

STEPS TO SIMPLIFY INSTRUCTIONS (CONT'D)

After completing the six **PRAISE** steps remember to:

- Complete each step of the instructions in the correct order.

If you will use these instructions often:

- Create your own set of instructions to help you remember the steps.

If the instructions are in paragraph form use:

- **PRAISE** Step 6 - **Easy Action Words** to help break it up into individual steps. Make one step to a line with it's own verb.

ACTIVITY 2 Try it!

Care of Rules

The steel rule is a precision tool and should be kept in the best condition. This can be accomplished by keeping the rule clean. Whenever the rule is used near or around water or with sweaty hands, the rule should be wiped dry and oiled to prevent rusting. Some of the common abuses which should be avoided are the using of the rule for a screw driver, a scraper, or a pinch bar to pry one part free from another.

Remember! A steel rule is a precision-made measuring tool - use it as such.

COMMUNICATIONS ON THE JOB II
SESSION 6

CONTEXT AND LOGICAL CONCLUSIONS

CONTEXT

Define:

____

____

____

Requires ____________ reading.

1) ____________________________________
2) ____________________________________
3) ____________________________________

These three skills = _______________________ which is crucial for technical reading.

Your Facilitator will guide you through the following activities and discussions.

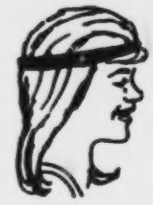
ACTIVITY 3 Context Clues

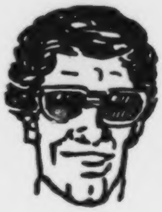
ACTIVITY 4 To Read and Draw Conclusions

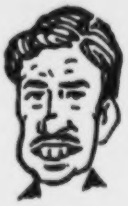
COMMUNICATIONS ON THE JOB II
SESSION 6

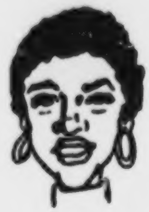
ACTIVITY 3

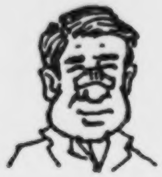
To be a successful technical reader, you must be a "detective" and find clues in your reading. Many descriptions and instructions are sketchy and hard to understand. In this activity match the descriptions to the suspects. Fill in the correct letter for each match.


A


B


C


D


E

This suspect:

SAMPLE: G 1. has a thinning hay loft.

______ 2. remembers to dot the ties.

______ 3. is a real pearl.

______ 4. never uses a razor.

______ 5. wears shades and a dimple.

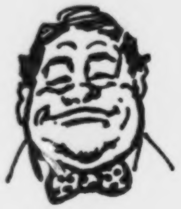
______ 6. wears hoops instead of shooting them.

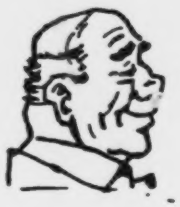
______ 7. loves petite caps.

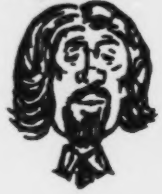
______ 8. has a cut about the rest.

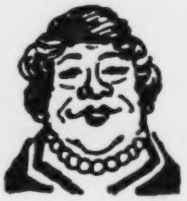
______ 9. better see the orthodontist.

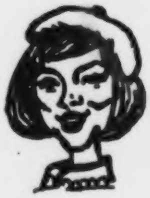
______ 10. is in a band.


F


G


H


I


J

Did you have trouble matching these descriptions to the suspects? To be successful, you had to carefully read the brief descriptions; then search for clues to link them to the illustrations. When reading technical information, even if it is poorly written, you must find clues which improve communication between the writer and the audience.

From: READING AND UNDERSTANDING TECHNICAL INFORMATION by Richard Marsh

COMMUNICATIONS ON THE JOB II
SESSION 6

ACTIVITY 4

Directions: Use the chart describing the types of fire extinguishers used at Presto Valve to answer the questions on the next page.

Types of Fire Extinguishers

Description	Contains	Used On
Chrome cylinders with "A"	"A" 2 1/2 pressurized water	Class A fires. Paper, wood.
Short red cylinder with black coneshaped fiber nozzle. Labeled "BC"	"BC" 5 lb. CO_2 (carbon dioxide)	Class B and C fires. Oil and electrical. Can be used on Class A fires w/ limited effectiveness.
Red cylinder short hose and nozzle. Labeled "ABC"	"ABC" 6 or 10 lb. of dry chemical	Class A, B, and & C fires. Paper, wood, oil and electrical.
Red cylinder, short	"ABC" 5 to 10 lb. halon	Computer rooms

COMMUNICATIONS ON THE JOB II
SESSION 6

ACTIVITY 4 (continued)

1. You see a fire in a pile of oily rags. The nearest fire extinguishers are a silver-colored one with a hose and a red one with a hose and nozzle. Which should you use?

____

2. Smoke is coming out of your computer. Which fire extinguisher should you use?

____

3. A pile of paper scrap is on fire. The two nearest fire extinguishers are a red one with a black nozzle and a red one with a short hose. Which one should you use?

____

4. You see a fire in a corner, but aren't sure what is burning. Which would be the best fire extinguisher to use?

____

COMMUNICATIONS ON THE JOB II
SESSION 6

MEMOS AND STANDARD OPERATING PROCEDURES

Written Communication on the Job

How many times have you heard someone at work say, "Could you write all that down?" or "Put that in writing for me, and I'll get it taken care of" ?

Writing is one way to make sure that plans get carried out right, that everyone understands a policy, that people follow safety rules, or that people know what their jobs are. In this session, you'll practice several kinds of writing that many people use on the job.

MEMOS

Define:

Why are memos important:

How does TRW use memos?

Are memos important in your job?

Memo Form

Memos are a simple form of writing that many people use on the job. You may not be required to use them yourself, but chances are that they pop up for you to read. If you were more confident in writing them well yourself, you may find a new way to get your good ideas across to others and be listened to.

A memo has some standard features that let the reader know important information about the memo.

Guidelines for Writing a Memo

1. Follow memo format, using theses headings above the message:

   TO:
   From:
   Subject:
   Date:

2. Use your full name followed by your initials.
3. Use the full name of the person or specify the group of people the memo is directed to.
4. Make the specific subject of the memo clear in the heading.
5. Organize your thoughts carefully before writing your memo. Be sure to include only relevant information. Be sure you give your reader everything he or she needs to know.
6. State the purpose of your memo in the first sentence.
7. After you write your memo, check it carefully to be sure it is clear, organized and complete. Rewrite it if necessary.

COMMUNICATIONS ON THE JOB II
SESSION 6

Model Memo

MEMO

To: Don Parker
From: Mercedes Hunter
Subject: Lateness of February Bank Reconciliation
Date: March 14, 1986

This memo should explain why I am behind schedule in completing the February bank reconciliation.

The February statement form the first Mercantile Bank does not reconcile with our books. Apparently several errors were made when our deposits were recorded in our books. As a result, the bank statement shows a balance that is $3,532.31 less than the amount shown on our books.

I understand that the bank reconciliation is to be completed by the fifteenth of each month under normal circumstances. However, I will not be able to finish it until the errors have been corrected and the books for February brought up to date. I am certain that the reconciliation will be finished by March 20. Please see me if you have any questions.

COMMUNICATIONS ON THE JOB II
SESSION 6

ACTIVITY: WRITING A MEMO FROM NOTES
USE GUIDELINES AND MODEL MEMO

USE YOUR OWN IDEA/SUGGESTION NOTES

SAMPLE NOTES:

Lee has some concern that the heating and cooling in the plant area is not always up to par. Lee has several ideas to help the situation. These are the notes that Lee wants to put into put these ideas in writing. Use Lee's notes to write a memo to submit to the Synchronous Steering Committee.

Heating problems Memo

3-30-93 to Synchronous Steering Committee
My Boss? anyone else? Keep a copy myself

problem

heat levels not consistent
hot and cold patches
takes days for the plant temp to catch up to outside conditions
hot outside-heat inside still on
cold outside- cool ventilation still on

solution/idea

review ventilation diagrams by TRW (Maint?)
check air flow with these new Flowmeter machines
new ducts off main duct in identified areas

MY NEW IDEA

use heat from forging area as I have shown on the sketch
include sketch

Trade Winds In Work Based Education, published by Partners In Education and Training, Baltimore, Maryland

COMMUNICATIONS ON THE JOB II
SESSION 6

SOPs

Define:

How are TRW SOPs used?

Are SPOs important in your job?

ACTIVITY: Analyze TRW SOPs

COMMUNICATIONS ON THE JOB II
SESSION 6

VOCABULARY # 3

Statistical

Collet

Ultrasonic

CNC

Induction

Segregator

Chamfer

Tolerance

SOP FOR ACMES

1. Stop the machines whenever defects occur...don't continue to make bad parts or defects.

2. Make sure center drill is sharp...if not change it.

3. Make sure face tool is sharp... if not sharpen or replace.

4. Take air hose and blow excess oil and grit out of center hole.

5. Check valve under 3 power magnifying glass to determine if valve is good or bad.

6. Record and track total number of parts run and total number of defects by FR by shift.

7. Repair any center hole defects on drill press.

8. Check OD R/O at least 2 times per shift and make needed changes...Don't add cost to valve.

9. This means if the center is too large or deep then scrap the valve. If not sure - check with supervisor.

STANDARD OPERATING PROCEDURE

DEPT 408-4

CORRECTIVE ACTION FOR WAUKESHA ENGINE AND GENERAL ELECTRIC.

SEGREGATION OF PARTS WITH OUT OF PRINT SEAT RUNOUT

PURPOSE: TO ELIMINATE THE POSSIBILITY OF PARTS WITH OUT OF PRINT SEAT RUNOUT FROM BEING PASSED ON TO VISUAL INSPECTION.

S.O.P.

SEAT OPERATORS TO CHECK SEAT RUNOUT 100% DURING OPERATION. PARTS ARE NOT TO EXCEED .0002 BELOW HIGH LIMIT ON BLUE PRINT UNLESS INSTRUCTED BY SUPERVISOR.

ANY PARTS EXCEEDING THIS TOLERANCE ARE TO BE GIVEN TO REPAIRMAN.

ALL PARTS RETURNED FROM REPAIR ARE TO BE GAGED TO VERIFY THAT SEAT RUNOUT IS NOW IN TOLERANCE.

AFTER VERIFICATION THE SEAT OPERATOR WILL SEND REPAIRED PARTS ON TO THE NEXT OPERATION.

AUGUST 8, 1991
TONY LEONARDI

S.O.P.

C.N.C. SET UP

1. REMOVE ALL VALVES AND SCRAP FROM PREVIOUS F.R.
2. GET SET UP CARD FROM SUPERVISOR
3. GET TAPES AND PRINTS FROM CRIB
4. GET PROPER GAGES SET
5. GET NECESSARY TOOLING AND MAKE CHANGES
6. RUN PROGRAM TAPE INTO COMPUTER
7. QUALIFY TOOL HOLDERS AS NEEDED
8. RUN VALVE AND GET READING FROM CRIB
9. MAKE NEEDED ADJUSTMENTS
10. TAKE ACID TEST ON STELLITE VALVES ONLY AND ADJUST
11. GET FINAL READING FROM CRIB
12. GET SUPERVISOR APPROVAL

** NOTE ** CHECK RUN OUT AT LEAST 4 TIMES DAILY
CHECK STELLITE LINE 2 TIMES DAILY

S.O.P.

ALL VALVES

IN TRAYS

SHOULD BE MARKED
(MAGIC MARKER)

ON THE STEM

PRIOR TO

FINISH GRINDING

CORRECTIVE ACTION FOR WAUKESHA ENGINE

QA678,679 11/1/91

CHARLIE

S.O.P.

CINCI STEM GRINDERS

ROUGH, SEMI. FINISH.

1. CLEAR OUT ANY F.R.'S BEFORE BEGINNING SET UP
2. DISCARD ANY SCRAP VALVES PROPERLY
3. OBTAIN SET UP CARD FROM SUPERVISOR
4. OBTAIN SKETCH FROM CRIB AND HAVE GAUGES SET IN GAUGE CRIB
5. DRESS TRACTOR WHEEL AND GRINDING WHEEL, THEN CHANGE BLADES
6. SET TRACTOR WHEEL TO BLADE, LEAVING 1/8" CLEARANCE BETWEEN TRACTOR WHEEL AND BLADE.
7. SET TRACTOR WHEEL SLIDE TO GRINDING WHEEL BY PUTTING A VALVE ON THE BLADE AND MOVING TRACTER WHEEL SLIDE.
8. SET KICKER ROD FOR PROPER GRIND LENGTH AND BLEND
9. GRIND VALVE
10. MAKE NECESSARY CHANGES
11. GET SUPERVISOR APPROVAL
12. CHECK STEM RUN OUT AT LEAST THREE (3) TIMES AN HOUR
13. (FINISH GRIND ONLY) CHECK STEM MICRO ON PROFILOMETER AFTER EVERY DRESS.
14. CHART FIVE (5) PARTS AN HOUR ON SPC CHARTS

S.O.P.

30/A LANDIS

1. REMOVE ALL PREVIOUS VALVES FROM AROUND MACHINE, DISCARD ALL SCRAP VALVES.
2. OBTAIN SET UP CARD FROM SUPERVISOR
3. OBTAIN PRINT AND MASTER VALVE FROM CRIBS.
4. SET UP NECESSARY GAUGES.
5. REMOVE COLLETS AND REPLACE WITH PROPER SIZE COLLET.
6. MOVE WORK HEAD TABLE TO PROPER ANGLE.
7. REPLACE OR ADJUST TIP STOP TO PROPER LENGTH.
8. REMOVE SEAT RUNOUT.
9. GRIND VALVE AND FIND SIZE.
10. CHECK PART ON ALL GAUGES AND MAKE NECESSARY ADJUSTMENTS.
11. USING PROPER BLUEING CONE, BLUE UP A PART (IF IT DOES NOT BLUE UP, MOVE SEAT ANGLE UNTIL PART BLUES UP.
12. GET READING FROM GAUGE CRIB.
13. OBTAIN SUPERVISOR APPROVAL.
14. CHECK ALL PARTS 100% ON ALL GAUGES.
15. CHECK SEAT MICRO TWO (2) TIMES AN HOUR.
16. RECORD ON SPC CHARTS ALL PERTINENT INFORMATION, (FIVE (5) PARTS AN HOUR.

12-1/2 LANDIS - STANDARD SETUP PROCEDURE

1. Clean machine of previous F.R.
2. Obtain setup card from supervisor.
3. Remove blade.
    - A. Unlock regulating wheel handwheel locking screw.
    - B. Retract regulating wheel by turning handwheel counter clockwise to assure proper working space for blade removal.
    - C. Loosen kicker rod and retract rod for blade clearance.
    - D. Loosen screws and remove blade & shims - obtain proper gage.
4. Exchange blueprint and blade for F.R. being S.U. - get gage set.
5. Dress regulating wheel.
    - A. Turn switch to dress to attain regulating wheel high speed.
    - B. Lower dresser slide on to cam.
    - C. Infeed dresser .001 or .002, turn outer traverse control valve clockwise (out) and counter-clockwise (for in). Inner traverse knob is for dresser traverse speed - repeat until wheel is completely clean.
    - D. Turn switch to grind to obtain running speed.
6. Blade setting.
    - A. Turn machine off.
    - B. Clean holder and work rest.
    - C. Insert blade in holder and tighten.
    - D. Check with scale to make sure blade is of equal height at both ends.
    - E. Standard height is 4.
    - F. Insert blade 1/8 inside of grinding wheel - break edge if needed.
    - G. Hold blade down when tightening in work rest.
7. Setting blade to grind wheel.
    - A. Bring grinding wheel to within .020 of blade.
    - B. Use .020 shim to insure clearance of blade to grinding wheel.
    - C. Lock grinding wheel handwheel.
8. Adjusting regulating wheel to touch point of valve.
    - A. Jog regulating wheel - where high side is next to blade.
    - B. Loosen and drop V-block.
    - C. Turn regulating wheel handwheel clockwise to allow valve to rest freely on blade.
    - D. Infeed regulating wheel to touch point and lock.
9. Set kicker rod and valve location.
    - A. Drop valve manually - set kicker to proper grind length - can be adj. later.
    - B. Reset V-block to within .020 of head O.D. without touching O.D.
    - C. To infeed head locator - lock locator valvair. Adjust locator button to place valve in contact with kicker rod - do not over adjsut (or force) valve into kicker.
    - D. Unlock valvair to retract locator - eject valve.
10. Find size.
    - A. Check and adjust coolant.
    - B. Check diamond - replace if needed. Reset and dress grinding wheel.

12/19/83

C. Grind valve to .001 oversize.

D. Check size - taper - blend - R.O. - flat spots & chatter.

E. Use micrometer to obtain final size.

F. Obtain O.K. from supervisor and inspector.

TROUBLE SHOOTING 12-1/2 LANDIS

1- STEM RUNOUTS

A- Check blade height - wear & for loose blade
B- Check regulating wheel speed
C- Dress regulating wheel
D- Check for play in regulating wheel bearings
E- Check bad forging & insufficient stock
F- Check coolant spout on valve and on dresser

2- BURNT STEMS

A- Check diamond & speed & infeed
B- Check diamond gear box & cable
C- Check coolant spout alignment
D- Dress regulating wheel
E- Check regulating wheel speed
F- Check bad forging & insufficient stock

3- STEM CHATTER

A- Check height & for loose blade
B- Check number of pieces on dress
C- Dress regulating wheel
D- Loose regulating wheel
E- Check locator for proper location of valve
F- Check for proper drag
G- Check V-block clearance
H- Check for play in regulating wheel bearing
I- Check regulating wheel alignment to grinding wheel
J- Check regulating wheel directional drive motor - if brushes are bad, motor speed will change - check with supervisor

4- STEM SIZE VARIATION

A- Check blade height & wear and for loose blade
B- Check diamond and infeed - also for play in post
C- Check hydraulic oil level
D- Check wheel guard clearance
E- Check for proper amount of coolant
F- Check for proper drag
G- Check for play in regulating wheel bearings
H- Loose regulating or grinding wheel
I- Check regulating wheel speed
J- Check locator for proper location of valve

5- WHEEL OR BLADE MARKS

A- Check proper coolant spout alignment
B- Check kicker rod and assembly
C- Check blade wear
D- Check diamond
E- Dress regulating wheel
F- Check V-block clearance
G- Check valve on ready finger for proper release
H- Check stem guide

6- GRIND LENGTH VARIATION

A- Check locator
B- Check for broken or worn blade
C- Check alignment of regulating wheel pocket with kicker cam
D- Check for broken kicker rod and kicker assembly
E- Check coolant for proper setting
F- Check for heavy shoulders from forging.

S.O.P.

SEGREGATION OF REJECTED PARTS

408-4

PURPOSE :

TO ELIMINATE THE POSSIBILITY OF DEFECTIVE PARTS GETTING PAST VISUAL INSPECTION

REASON :

CORRECTIVE ACTION FOR WAUKESHA ENGINE

S.O.P. :

ALL VALVES SET ASIDE AT VISUAL MUST BE CLEARLY MARKED WITH RED MARKING PENCIL. ONCE THE PARTS ARE REPAIRED, THEY ARE TO BE PLACED IN 10 SLOT BOXES FOR VISUAL PERSONNEL TO REVIEW. *ONCE THE REPAIRED PART IS RE-INSPECTED FOR ALL DEFECTS* AND IS ACCEPTABLE, VISUAL PERSONNEL WILL REMOVE THE RED MARKING AND PLACE THE PART IN TRAY FOR SHIPPING.

TRW VALVE DIVISION

QUALITY CONTROL ORDER

TPFC-1003 REV. 3 PRINTED IN U.S.A.

QCO -	406
DATE:	3/31/92
PAGE NO.	1 of 5

SUPERSEDES:	QCO NO. 406	PAGE NO. A11	DATED 2/8/90	PART NAME Valves

PROCEDURE FOR HANDLING AND CONTROLLING DISCREPANT MATERIAL

1.0 PURPOSE:

To establish a uniform and well understood procedure for identifying, controlling, segregating and dispositioning of discrepant material. To ensure that the disposition of discrepant material is responded to within seventy-two (72) hours at the Cleveland Valve Division.

2.0 SCOPE:

This QCO applies to the raw material, any parts received from outside vendors in-process and finished goods in the Cleveland Valve Division.

3.0 DEFINITIONS:

3.1 "Material" is referred to broadly as raw material, any part, component, or finished product used in the manufacturing process.

3.2 Discrepant material is any material which does not conform to all applicable product drawing requirements, operational sketch requirements, engineering specifications, material specifications, acceptance standards, quality requirements, process specifications, or TRW workmanship standards.

4.0 RESPONSIBILITY:

4.1 The quality assurance and manufacturing departments are responsible for ensuring that all nonconforming material is properly identified, segregated, dispositioned or disposed of within the established time. The quality assurance department is responsible for notifying the customer of any suspected or nonconforming material shipped to them.

4.2 The manufacturing/quality department is responsible for:

A. Stating the cause of the discrepancy.
B. Notification to the proper causing department or area.
C. Determining the action to be taken on discrepant material, i.e., standard repair, sort, scrap, use as is, or request a deviation.

QUALITY CONTROL:	ENGINEERING:	LAB.	CUST. REP.
INSPECTION: 3/31/92	MANUFACT.:	GOVERN. REP.	PREPARED BY: 31/3/9

TRW VALVE DIVISION

QCO.	406
DATE:	3/31/92
PAGE NO.	2 of 5

QUALITY CONTROL ORDER

TPFC-1009 REV. 3 PRINTED IN U.S.A.

SUPERSEDES:	QCO NO. 406	PAGE NO. All	DATED 2/8/90	PART NAME Valves

4.3 The quality department is responsible to interface with appropriate parties (plant manager, production manager, product engineering, process engineering, materials laboratory and the customer) and provide a timely response (72 hours) on deviation requests.

5.0 PROCEDURE:

5.1 If a nonconformance is found by a supplier, incoming inspection, lab, manufacturing, floor inspection or outgoing audit, the quality/manufacturing department will red tag the nonconforming material and affix the red tag to all logical groupings (tubs, pans, skids, pallets, boxes, etc.).

5.2 The following sections of the "do not use," red tag are to be filled out by the person initiating the red tag:

A. part number (FR)
B. date
C. originator's master number (inspection number)
D. reason held
E. quantity suspect
F. department
G. shift
H. shop order number and/or lot number
I. last operation completed

5.3 Quality department informs materials management and manufacturing of the nonconformance, and the customer if the nonconforming parts were suspected to have been shipped to the customer.

5.4 Manufacturing/material control moves the red tagged material to the appropriate bonded area.

5.5 Quality/manufacturing departments review the red tagged material in the bonded area for the following corrective action: scrap/repair/sort/use with deviation/use as is.

5.6 Quality department audits the red tagged material after the corrective action is taken and removes the red tag and records the corrective action.

QUALITY CONTROL:	ENGINEERING:	LAB.	CUST. REP.
INSPECTION:	MANUFACT.	GOVERN. REP.	PREPARED BY:

TRW VALVE DIVISION

QUALITY CONTROL ORDER

TPFC-1003 REV. 3 PRINTED IN U.S.A.

QCO -	406
DATE:	3/31/92
PAGE NO.	3 of 5

SUPERSEDES:	QCO NO. 406	PAGE NO. All	DATED 2/8/90	PART NAME Valves

6.0 DISTRIBUTION:

6.1 The red tag will remain affixed to the nonconforming material until the proper corrective action is taken: scrap/repair/sort/use with deviation/or use as is.

6.2 The white copy of the red tag will be returned to the quality office. The quality office will issue a DMR report listing all material held in the bonded areas. The DMR report will be issued monthly to the manufacturing managers, the production control manager and the plant manager.

6.3 The red tag will be initialed and removed from the nonconforming material when the proper corrective action is taken. The red tag will be initialed by the person who audits the material for proper corrective action. The red tag will then be returned to the quality office.

QUALITY CONTROL:	ENGINEERING:	LAB.	CUST. REP.
INSPECTION: Frank Holupka	MANUFACT.	GOVERN. REP.	PREPARED BY:

OBJECTIVES

SESSION 7

- Active Listening Skills
- Job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB II
SESSION 7

ACTIVE LISTENING

WHAT IS LISTENING?

Listening is:

- Taking in information and the intent of talkers, other people and/or ourselves while withholding judgment and being empathetic
- Encouraging talkers to continue communicating
- Providing limited but positive input to a talker to carry the idea forward

To help us more fully understand what listening is, consider the following two questions:

1. What does it feel like to really listen to someone else?

____

____

2. What does it feel like when someone really listens to you?

____

____

THREE LEVELS OF LISTENING

Level One -	Listening to both the content and intent of what a speaker is saying, nonjudgmentally and empathetically.
Level Two -	Hearing, but not really listening. At this level, listeners hear the words, but often miss the deeper meaning conveyed by nonverbal signals.
Level Three -	Passive listening or not really listening at all. Instead, listeners are daydreaming, or thinking about where they'll go for lunch, or concentrating on what they want to say next.

COMMUNICATIONS ON THE JOB II
SESSION 7

BARRIERS TO LISTENING

- Filters ____________________
- Biases ____________________
- Assumptions ____________________
- Hearing What We Want to Hear ____________________
- Cultural Myths ____________________
- Negative Emotions ____________________
- Negative Use of Time Lag ____________________
- Semantics ____________________
- Misreading Nonverbal Cues ____________________
- Physical Factors ____________________
- Daydreaming ____________________

SOME BARRIERS THAT PREVENT ME FROM LISTENING EFFECTIVELY:

____

____

COMMUNICATIONS ON THE JOB II

SESSION 7

STYLES OF LISTENING

The Faker -	Fakers pretend to listen, but they are actually so caught up in giving the impression that they're paying attention that they really are not listening at all.
The Dependent Listener -	Dependent listeners want to please others, so instead of listening, they're concentrating on what kind of impression they're making on the other person.
The Interrupter -	Interrupters are so focused on what they want to say that they often don't even hear others, and worse yet interrupt them while they're talking to make a point that usually isn't related to what the talker is saying.
The Self-Conscious Listener -	Self-conscious listeners focus on well the conversation is going, on if they're creating a positive image when they're speaking, and on the appearances of themselves or others. Since they're so distracted by how things are going, it's hard for them to listen effectively to what's being said.
The Intellectual or Logical Listener -	Intellectual listeners hear only what they want to hear. They often concentrate on the facts only, ignoring emotional or nonverbal communication. So, what they really do is block out more than half of what the talker is really trying to communicate.

COMMUNICATIONS ON THE JOB II
SESSION 7

OK ATTITUDES

1. I'm OK - You're OK

____

____

____

2. I'm OK - You're Not OK

____

____

____

3. I'm Not OK - You're OK

____

____

____

4. I'm Not OK - You're Not OK

____

____

____

COMMUNICATIONS ON THE JOB II

SESSION 7

VIDEO VIGNETTE - LATENESS - POOR MODEL

1. What kinds of behavior did Paul use that indicated he was in a not-OK attitude mode?

____

____

____

2. How did Fred respond to Paul's not-OK behavior?

____

____

____

____

3. Do you think the lateness problem has been solved? Why or why not?

____

____

____

____

COMMUNICATIONS ON THE JOB II
SESSION 7

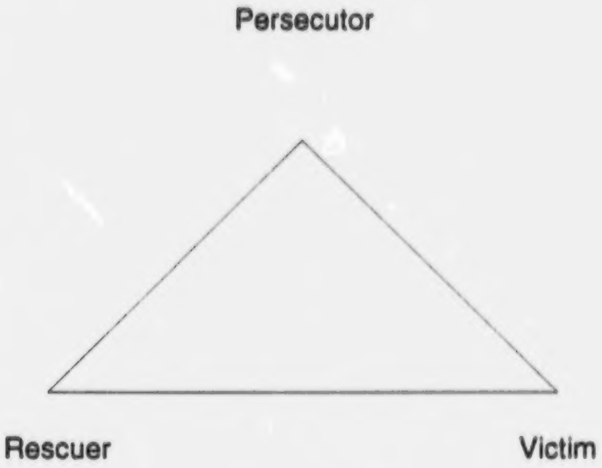
VIDEO VIGNETTE - LATENESS - GOOD MODEL

1. What were the main differences between the two demonstrations?

2. What indicated to you that Paul was listening to Fred at level one in the OK-OK attitude mode?

COMMUNICATIONS ON THE JOB II
SESSION 7

THE DRAMA TRIANGLE



COMMUNICATIONS ON THE JOB II

SESSION 7

VIDEO VIGNETTE - STAYING OUT OF RESCUING

1. What did Tim do to stop himself from rescuing Marian?

2. What effect did Tim's listening behavior have on Marian?

COMMUNICATIONS ON THE JOB II
SESSION 7

VOCABULARY # 4

SPC ____

____

Median ____

____

Fillet ____

____

Profilometer ____

____

Thimble ____

____

Comparator ____

____

Schematic ____

____

Projection ____

____

TRW COMMUNICATIONS ON THE JOB II

OBJECTIVES

SESSION 8

- How to Deal with Difficult Communication Situations
- Role-playing Exercise
- Job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB II

SESSION 8

DEALING WITH DIFFICULT COMMUNICATION SITUATIONS

Many factors combine to create difficult communication situations. Can you name a few?

Others:

Communication does not occur in a vacuum. Any communication situation involves people, words, emotions, attitudes, and non-verbal interactions. Can you name any other ingredients that add to the communication "stew"?

COMMUNICATIONS ON THE JOB II
SESSION 8

DEALING WITH DIFFICULT COMMUNICATION SITUATIONS

The I-Messages Approach

	I-Messages Approach		You-Blaming Approach
1.	This approach leads to a win/win resolution.	1.	This approach usually leads to a win/lose resolution.
2.	A plan of action is developed.	2.	There's no plan of action.
3.	One person discloses something he or she is unhappy about in hopes of changing both people's behavior to solve the problem.	3.	One person discloses something he or she is unhappy about with the intent of letting the other person know he or she should change.
4.	This approach uses the OK-OK attitude mode.	4.	This approach uses one of the not-OK attitude modes.
5.	This approach promotes confrontation that is objective, and not overly emotional.	5.	This approach promotes confrontation that dumps negative feelings on another person.
6.	The person is aware of nonverbal behavior, both his or hers, and the other person's.	6.	The person is unaware of either person's nonverbal behavior.
7.	The person states a message in a nonblaming, noncritical manner.	7.	The person states a message in a blaming, critical, judgmental manner.
8.	The person takes responsibility for his or her own feelings.	8.	The person blames the other person for his or her feelings.
9.	The person observes and states specifically and nonjudgmentally what behavior is causing a problem.	9.	The person labels the behavior as good or bad, right or wrong.
10.	The person tries not to use words that push the other's hot buttons.	10.	Deliberately uses words that push the other's hot buttons.

COMMUNICATIONS ON THE JOB II
SESSION 8

DEALING WITH DIFFICULT COMMUNICATION SITUATIONS

The I-Message Approach

Some Examples

I-Messages	You-Blaming Messages
I'm embarrassed when you criticize me in front of my co-workers. I feel it's degrading to me.	You're always embarrassing me by criticizing me constantly in front of my co-workers.
I feel angry when you don't get your work done on time. I think it makes the whole department look bad.	You make us look bad because you never get your work done on time.
I expect you not to take longer than 10 minutes for a coffee break.	You're always taking long breaks.

Now it's your turn. Below are two you-blaming statements. Change them to I-message statements.

I-Message	You-Blaming Message
	You always leave your workstation a mess and I'm stuck cleaning up after you.
	You never tell me what's going on. You act like I don't even work here.

COMMUNICATIONS ON THE JOB II
SESSION 8

DESCRIBING BEHAVIOR

DO's	DON'Ts
DO Stay with what a person does.	**DON'T** Make comments about what you think a person is.
DO Use adverbs that relate to specific actions.	**DON'T** Use adjectives that label someone.
Ex: He talked loudly in the meeting.	Ex: He's a loudmouth.
DO Describe what occurred.	**DON'T** Use labels that judge what's happened.
Ex: When we don't agree, the problem usually doesn't get resolved.	Ex: You're wrong to be so stubborn.

COMMUNICATIONS ON THE JOB II
SESSION 8

VIDEO VIGNETTE - DESCRIBING BEHAVIOR #1, #2, #3 AND #4

1. How do the two kinds of statements differ?

2. What are the main benefits of using the **describing behavior**?

COMMUNICATIONS ON THE JOB II
SESSION 8

DESCRIBING BEHAVIOR EXERCISE

Change the statements below to describe behavior rather than label people. You'll have to use your imagination to fill in specific facts.

Sally, you're just trying to show Geri up.

Rick, you're such a slowpoke.

Carlos, you're very rude.

Don't fly off the handle now, Marla.

COMMUNICATIONS ON THE JOB II
SESSION 8

POSITIVE FEEDBACK VS. PRAISE

Positive Feedback	Praise
A positive comment with meaning that specifically lets the listener know what the speaker values	A positive judgment with little additional meaning
Specific, related to a task	General and non-specific
A statement of observation and appreciation	Value judgment such as right, wise or good
Identifies behavior and describes the listener did	Labels behavior and judges what the listener did
Rings true	Can be taken as phony

COMMUNICATIONS ON THE JOB II
SESSION 8

VIDEO VIGNETTE - PRAISE/POSITIVE FEEDBACK #1, #2, AND #3

1. What is the major difference between the two approaches?

____

____

____

____

2. How well did Jon, June, and Stella do in carrying out the criteria for stating positive feedback?

____

____

____

____

COMMUNICATIONS ON THE JOB II

SESSION 8

PRAISE/POSITIVE FEEDBACK EXERCISE

Change the statements below to provide positive feedback rather than praise. You'll have to use your imagination to fill in specific facts.

Jack, you really do good work.

____

____

Tina, you're such a nice person.

____

____

I can't believe how thoughtful you are, Mario.

____

____

Joyce, you're so talented.

____

____

COMMUNICATIONS ON THE JOB II
SESSION 8

ROLEPLAYING EXERCISE

Each person in the group is assigned to one of the roles on the next page. After reading and putting some thought into how to play your role, act out the following scenario with the people in your group.

Scenario: Roy is responsible for safety in his department. There are two other employees in his department, George and Brian. George doesn't follow safety standards as he should. George often doesn't wear his safety glasses, piles boxes higher than is safe, and sometimes has boxes jutting out into the aisle. Roy would like to get George to change his behavior. He knows that instead of judging and labeling George, he has to speak to him using the describing behavior approach. Roy speaks to George about his unsafe practices with the goal of getting him to commit to changing his behavior.

Brian, on the other hand, does a good job following safety practices. Roy wants to let Brian know that he recognizes and appreciates how Brian follows the safety rules. He realizes that he needs to use positive feedback rather than praise so that Brian will feel he's sincere and to keep Brian motivated to continue following safety practices. Roy talks to Brian about his behavior using positive feedback.

COMMUNICATIONS ON THE JOB II

SESSION 8

ROLEPLAYING EXERCISE (cont'd)

Roy:	Not a supervisor, but charged with the responsibility of safety in his department. His first reaction to George is to tell George that he's careless and to tell George what he should do. But Roy realizes that this approach won't do much to change George's behavior. That's why he decided to use the describing behavior approach and good listening skills to get George to change his safety ways. He also knows it would be easier to just tell Brian, "Good job." But he realizes this won't motivate Brian to keep up the good work or win Brian's trust for the future. He reasons that giving positive feedback about specific behaviors will show Brian that he does notice and appreciate Brian's contributions to department safety.
George:	Doesn't really care about safety. He just does whatever's easiest at the time. When Roy first approaches him about his unsafe practices, he tells Roy that neither he nor any other employee has ever been injured by anything he's done or not done. But because Roy listens to him and doesn't judge him, Roy is able to persuade him to change his practices by pointing out how he could benefit from following safe practices.
Brian:	Always tries to co-operate. However, he is a little suspicious when people praise him. He sometimes feels that because he's co-operative, people take advantage of him. When someone praises him, he figures they just want something out of him. When Roy talks to him about his safety practices, he's not sure Roy's sincere and tries to figure out what Roy really wants. But as Roy continues talking, he realizes that Roy is sincere and just wants to recognize him for following safety rules and keep him motivated in the area of safety.

COMMUNICATIONS ON THE JOB II
SESSION 8

ROLEPLAYING EXERCISE - EVALUATION QUESTIONS

1. What types of statements were used to show that Roy was using describing behavior rather than judging and labeling?

2. How did the describing behavior approach help George to commit to changing his safety behavior?

3. What types of statements were used to show that Roy was using positive feedback rather than praise?

COMMUNICATIONS ON THE JOB II

SESSION 8

ROLEPLAYING EXERCISE - EVALUATION QUESTIONS (cont'd)

4. How did positive feedback help to create a rapport with Brian?

5. What other good listening skills were demonstrated by Roy?

COMMUNICATIONS ON THE JOB II
SESSION 8

VOCABULARY REVIEW

Divide into pairs to work on this project. You and your partner use this list and choose six words to work with. Pick words that may stump them. Construct a meaningful work related sentence for each word. Give or read the sentences to your partner and ask them to define the vocabulary word. If they can do this they have used their knowledge of the word and also the context you presented with the sentence to define these words. GOOD LUCK

1) shear
2) gage
3) burrs
4) taper
5) blend
6) chrome
7) forge
8) profile
9) barrel
10) rotary
11) dresser
12) exhaust
13) clutch
14) statistical
15) collet
16) CNC
17) ultrasonic
18) induction
19) segregator
20) chamfer
21) tolerance
22) SPC
23) Median
24) Fillet
25) profilometer
26) thimble
27) comparator
28) schematic
29) projection

TRW COMMUNICATIONS ON THE JOB II

OBJECTIVES

SESSION 9

- Identifying Codes and Symbols Used on Schematics and Blueprints
- Job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB II
SESSION 9

READING BLUEPRINTS

Blueprints are an important form of ______________ in the workplace.

This session will present several different activities to help increase your understanding of Blueprints.

VIDEO Blueprints

Your facilitator will help you determine the best way to use the Technical Article and the video to learn the most you can about blueprints. When you read this article try to use the reading skills that have been presented in this class. Try:

1. Using **ACTIVE READING**
2. **SETTING A PURPOSE**
3. **PREVIEWING** and
4. **ASKING QUESTIONS** to determine the main thought of the sections and paragraphs.

Several **NEW** Interactive Reading Strategies to try:

Condensing	Read a section, one or two paragraphs, without making any marks. Then go back and underline or highlight only specific words, not entire sentences. You should be able to re-read the marked words and have them make sense as full sentences.
Reflecting	Stop at intervals and re-think what you have read.
Setting Goals	To efficiently and effectively read this lengthy technical article, you are encouraged to set reading goals. Be realistic. If the whole thing looks like too much for you, spend several small sessions reading and trying the above strategies.

Evaluating yourself by using the Programmed Exercise Questions. Your facilitator will provide the answers.

SCANNING DRILL 1

11/32NDS IS EQUIVALENT TO HOW MANY MILLIMETERS?

SCANNING DRILL 2

.734375 DECIMAL INCHES IS EQUIVALENT TO HOW MANY FRACTIONAL INCHES?

Table 3-1. Decimal inch and millimeter equivalents

Fractional inches				Decimal inches	Millimeters	Fractional inches				Decimal inches	Millimeters
8ths	16ths	32nds	64ths			8ths	16ths	32nds	64ths		
			1	0.015625	0.396875				33	0.515625	13.096875
		1		.031250	0.793750			17		.531250	13.493750
			3	.046875	1.190625				35	.546875	13.890625
	1			.062500	1.587500		9			.562500	14.287500
			5	0.078125	1.984375				37	0.578125	14.684375
		3		.093750	2.381250			19		.593750	15.081250
			7	.109375	2.778125				39	.609375	15.478125
1				.125000	3.175000	5				.625000	15.875000
			9	0.140625	3.571875				41	0.640625	16.271875
		5		.156250	3.968750			21		.656250	16.668750
			11	.171875	4.365625				43	.671875	17.065625
	3			.187500	4.762500		11			.687500	17.462500
			13	0.203125	5.159375				45	0.703125	17.859375
		7		.218750	5.556250			23		.718750	18.256250
			15	.234375	5.953125				47	.734375	18.653125
2				0.250000	6.350000	6				.750000	19.050000
			17	0.265625	6.746875				49	0.765625	19.446875
		9		.281250	7.143750			25		.781250	19.843750
			19	.296875	7.540625				51	.796875	20.240625
	5			.312500	7.937500		13			.812500	20.637500
			21	0.328125	8.334375				53	0.828125	21.034375
		11		.343750	8.731250			27		.843750	21.431250
			23	.359375	9.128125				55	.859375	21.828125
3				.375000	9.525000	7				.875000	22.225000
			25	0.390625	9.921875				57	0.890625	22.621875
		13		.406250	10.318750			29		.906250	23.018750
			27	.421875	10.715625				59	.921875	23.415625
	7			.437500	11.112500		15			.937500	23.812500
			29	0.453125	11.509375				61	0.953125	24.209375
		15		.468750	11.906250			31		.968750	24.606250
			31	.484375	12.303125				63	.984375	25.003125
4				.500000	12.700000	8	16	32	64	1.000000	25.400000

SCANNING DRILL 3

WHAT STEP # AND LETTER DESCRIBES USING A .020 SHIM?

12-1/2 LANDIS - STANDARD SETUP PROCEDURE

1. Clean machine of previous F.R.
2. Obtain setup card from supervisor.
3. Remove blade.
    - A. Unlock regulating wheel handwheel locking screw.
    - B. Retract regulating wheel by turning handwheel counter clockwise to assure proper working space for blade removal.
    - C. Loosen kicker rod and retract rod for blade clearance.
    - D. Loosen screws and remove blade & shims - obtain proper gage.
4. Exchange blueprint and blade for F.R. being S.U. - get gage set.
5. Dress regulating wheel.
    - A. Turn switch to dress to attain regulating wheel high speed.
    - B. Lower dresser slide on to cam.
    - C. Infeed dresser .001 or .002, turn outer traverse control valve clockwise (out) and counter-clockwise (for in). Inner traverse knob is for dresser traverse speed - repeat until wheel is completely clean.
    - D. Turn switch to grind to obtain running speed.
6. Blade setting.
    - A. Turn machine off.
    - B. Clean holder and work rest.
    - C. Insert blade in holder and tighten.
    - D. Check with scale to make sure blade is of equal height at both ends.
    - E. Standard height is 4.
    - F. Insert blade 1/8 inside of grinding wheel - break edge if needed.
    - G. Hold blade down when tightening in work rest.
7. Setting blade to grind wheel.
    - A. Bring grinding wheel to within .020 of blade.
    - B. Use .020 shim to insure clearance of blade to grinding wheel.
    - C. Lock grinding wheel handwheel.
8. Adjusting regulating wheel to touch point of valve.
    - A. Jog regulating wheel - where high side is next to blade.
    - B. Loosen and drop V-block.
    - C. Turn regulating wheel handwheel clockwise to allow valve to rest freely on blade.
    - D. Infeed regulating wheel to touch point and lock.
9. Set kicker rod and valve location.
    - A. Drop valve manually - set kicker to proper grind length - can be adj. later.
    - B. Reset V-block to within .020 of head O.D. without touching O.D.
    - C. To infeed head locator - lock locator valvair. Adjust locator button to place valve in contact with kicker rod - do not over adjaut (or force) valve into kicker.
    - D. Unlock valvair to retract locator - eject valve.
10. Find size.
    - A. Check and adjust coolant. 12/19/83
    - B. Check diamond - replace if needed. Reset and dress grinding wheel.

SCANNING DRILL 4

WHAT IS THE G CODE FOR AUTOMATIC ROUGH FACING CYCLE?

APPENDIX TWO

G CODES

CODE	GROUP	DEFINITION
G00	1	Rapid Traverse Positioning Mode
G01	1	Linear Interpolation
G02	1	Clockwise Circular Interpolation
G03	1	Counterclockwise Circular Interpolation
G04	0	Dwell
G10	0	Offset Value Setting
G20	6	Inch Data Input
G21	6	Metric Data Input
G22	9	Stored Stroke Limits On
G23	9	Stored Stroke Limits Off
G32	1	Threadcutting Routine (Constant Lead)
G34	1	Threadcutting Routine (Variable Lead) [OPTION]
G40	7	Cancel Tool Nose Radius Compensation
G41	7	Tool Nose Radius Compensation (Part Right)
G42	7	Tool Nose Radius Compensation (Part Left)
G50	0	Maximum RPM Limit Used With CSS (G96)
G65	0	User Macro Call
G70	0	Automatic Finishing Cycle
G71	0	Automatic Rough Turning Cycle
G72	0	Automatic Rough Facing Cycle
G73	0	Automatic Rough Pattern Repeat Cycle
G74	0	Automatic Drilling Cycle
G76	0	Automatic Threading Cycle
G90	1	Canned Turning Cycle
G92	1	Canned Threading Cycle
G94	1	Canned Facing Cycle
G96	2	Constant Surface Speed
G97	2	Direct RPM Programming
G98	5	Inches/mm per Minute Feedrate
G99	5	Inches/mm per Revolution Feedrate

SCANNING DRILL 5

WHAT IS THE TOCCO FURNACE °F FOR SAE 8655H ?

HOT WORKING TEMPERATURES

Material's Engineering
TRW Valve Division

VD-PS-2028

Issued: 4-9-57
Revised: 9-9-66
Revision = *

VMS No.	Material	Shearing °F (±50°F)	Forging Tocco Furnace °F (±30°F)	Forging Gas Furnace °F (±30°F)	Nubbin Clos and Nubbin Bump-Up °F (±30°F)
1	TPA	Cutomatic only	1900	1850	1900
2	CNS	1100	1960	1930	1960
3	SAE 71360	1100	1930	1900	
4,39,40	Sil. XB	1300	2050	2020	2050
6	TPRK	Cutomatic only			
7	Nichrome	1525 Gas only	2010	1960	
11	SAE 8645 (Rotobodies Only)		1450		
31,32	C-1041	1100	1800	1770	
42	Sil. 1	1300	1930	1900	1930
44	SAE 8440	1100	1890	1860	1890
47	SAE 4140	1100	1800	1770	1800
48	SAE 3140	1100	1800	1770	1800
52,214	Sil. 10	1300	2010	1960	2010
55,64	21-12N	1550 Gas only	2010	1960	2010
63	VSM	1300	1880	1850	
81	440C	1525 Gas only	1950	1920	
93	Air Hardening		1930	1900	
110	C-1008 (Rotobodies Only)		1450		
112	C-1117	1100	1730	1700	
132	SAE 8645 —	1100	1730	1700 -	
134	TPM	Cutomatic		2125 (1)	2150
147	TXCR	1300	1980	1950	
88,199	410	1525 Gas Only	2000	1970	
201,202	21-4N	1550 Gas Only	2150	2100	2150
201	21-4N T. Neck	1550 Gas Only	2100	2050 (2)	2100
244	SAE 8655H	1100	1980	~~1950~~ [illegible]	
408	B-312	1550 Gas Only	2100	2050	2100 —
411	N-155	1525 Gas Only	2050	2000	2050
412	Hastelloy X	1525 Gas Only	2075	2025	
419	422	1525 Gas only	1950	1920	
471	Nimonic 90 Cutomatic only		2075	2025	2075
472	Nimonic 80A Cutomatic only		2075	2025	2075
473	Inco 751 Cutomatic only		2100	2050	
478	21-2N	1525 Gas only	2150	2100	

---

1. Preheated 1600°F- 1650°F in compartment furnace.
2. Tapered neck.
3. Note: Slugs over 1-7/16" in diam. and over 2" in height will require the following pre-heat in a gas furnace:

1550°F to 1600°F		1450° to 1500°F	
VMS-1	VMS-52, 214	VMS-31,32	VMS-48
VMS-42	VMS-55,64	VMS-47	VMS-132
VMS-44	VMS-147 VMS 201,202		

MS-401.

1980 - 2040

SIL-10N.

446

BEST COPY AVAILABLE

SCANNING DRILL 6

WHAT IS THE SETTING OF THE RANGE SELECTOR FOR THE 8627-6 PYROMETER AT THE 1500-2800 °C RANGE?

PART III

7. RANGE SELECTION

If the approximate temperature of the target is known or can be estimated, obtain the corresponding setting from the range selector in Table II. Then turn the range selector, Fig. 2, until this setting is opposite the index on the front of the instrument. If the approximate temperature of the target is not known or cannot be estimated, set the range selector on the highest range.

TABLE II — RANGE SELECTOR SETTINGS

PYROMETER	RANGE	SETTING OF RANGE SELECTOR
8627-3, 8627-5	1400-2250° F	L
8627-3, 8627-5	1950-3200° F	M
8627-5	2700-5200° F	H
8627-4, 8627-6	775-1225° C	L
8627-4, 8627-6	1075-1750° C	M
8627-6	1500-2800° C	H
8627-3	1950-3200° F★	.4
8627-4	1075-1750° C★	.4

★This selector setting is for measuring the temperature of the target whose emissivity is 0.4. This feature applies only to this temperature range.

SCANNING DRILL 7

WHAT IS THE PART NO. OF THE OPERATING VALVE BODY?

PARTS LIST

PART NO.	ITEM
1	Base and Reservoir
2	Piston
3	Top Bridge
4	Middle Plate
5	Table
6	Long Posts (2), each
7	Short Posts (2), each
8	Upper Jaw
9	Lower Jaw
10	Handwheel
11	Motor Bracket
12	½ H.P. Motor
13	Convex Washer, 1⅝"
14	Convex Washer, 2"
15	Rubber Washer, 1⅜"
17	Rubber Washer, 2"
18	Upper Jaw Lock Nut
19	"V" Grips
20	Shims (4), each
23	Bottom Transverse Blocks (2), each
24	Top Transverse Blocks, each
27	Bottom Compression Blocks
28	Top Compression Blocks
48	Oil Cover
49	5/16" Balls (8), each
50	½" x 2⅜" Dowels (3), each
52	1⅜" Nuts (2), each
53	1⅜" Nut
73	⅜" Globe Valves (2), each
87	Complete Safety Valve
88	Complete Regulator Valve
89	Operating Valve Body
90	Pump
91	Pump Seal
92	Motor Coupling
93	Valve Stem Assembly
95	16" Gauge
96	Double Gauge Bracket
97	Single Gauge Bracket
98	Check Valve for Gauge, each
100	Oil Level Gauge
	5/16" Ball Springs (4), each
	Dump Valve Complete

MINIMUM INVOICE CHARGE OF $2.50

BEST COPY AVAILABLE

SCANNING DRILL 8

WHAT IS THE VICKERS HARDNESS CONVERSION # FOR ROCKWELL HARDNESS "BRALE" LOAD OF 150 KG AT A 53 READING.

HARDNESS CONVERSION TABLE

FOR HARDENED STEEL AND HARD ALLOYS

SCALE									
C	A	D	15-N	30-N	45-N		Brinell	G	
Rockwell Hardness Tester			Rockwell Superficial†				Hultgren 10 m.m. Ball	Rockwell Tester 1/16 Ball	
Penetrator						*VICKERS			S
"Brale"			"N Brale"						
Load (kg.)									
150	60	100	15	30	45	10	3000	150	
80	92.0	86.5	96.5	92.0	87.0	1865	....	....	
79	91.5	85.5	....	91.5	86.5	1787	....	....	
78	91.0	84.5	96.0	91.0	85.5	1710	....	....	
77	90.5	84.0	....	90.5	84.5	1633	....	....	
76	90.0	83.0	95.5	90.0	83.5	1556	....	....	
75	89.5	82.5	....	89.0	82.5	1478	....	....	
74	89.0	81.5	95.0	88.5	81.5	1400	....	....	
73	88.5	81.0	....	88.0	80.5	1323	....	....	
72	88.0	80.0	94.5	87.0	79.5	1245	....	....	
71	87.0	79.5	....	86.5	78.5	1160	....	....	
70	86.5	78.5	94.0	86.0	77.5	1076	....	....	
69	86.0	78.0	93.5	85.0	76.5	1004	....	....	
68	85.5	77.0	....	84.5	75.5	942	....	....	
67	85.0	76.0	93.0	83.5	74.5	894	....	....	
66	84.5	75.5	92.5	83.0	73.0	854	....	....	
65	84.0	74.5	92.0	82.0	72.0	820	....	....	
64	83.5	74.0	....	81.0	71.0	789	....	....	
63	83.0	73.0	91.5	80.0	70.0	763	....	....	
62	82.5	72.5	91.0	79.0	69.0	739	....	....	
61	81.5	71.5	90.5	78.5	67.5	716	....	....	
60	81.0	71.0	90.0	77.5	66.5	695	614	....	
59	80.5	70.0	89.5	76.5	65.5	675	600	....	
58	80.0	69.0	....	75.5	64.0	655	587	....	
57	79.5	68.5	~~89.0~~	75.0	63.0	636	573	....	
~~56~~	79.0	67.5	88.5	74.0	62.0	617	560	....	
~~55~~	78.5	67.0	~~88.0~~	73.0	61.0	598	547	....	
54	78.0	66.0	87.5	72.0	59.5	580	534	....	
53	77.5	65.5	87.0	71.0	58.5	562	522	....	
52	77.0	64.5	86.5	70.5	57.5	545	509	....	
51	76.5	64.0	86.0	69.5	56.0	528	496	....	
50	76.0	63.0	85.5	68.5	55.0	513	484	....	
49	75.5	62.0	85.0	67.5	54.0	498	472	....	
48	74.5	61.5	84.5	66.5	52.5	485	460	....	
47	74.0	60.5	84.0	66.0	51.5	471	448	....	
46	73.5	60.0	83.5	65.0	50.0	458	437	....	
45	73.0	59.0	83.0	64.0	49.0	446	426	....	
44	72.5	58.5	82.5	63.0	48.0	435	415	....	
43	72.0	57.5	82.0	62.0	46.5	424	404	....	
42	71.5	57.0	81.5	61.5	45.5	413	393	....	
41	71.0	56.0	81.0	60.5	44.5	403	382	....	
40	70.5	55.5	80.5	59.5	43.0	393	372	....	
39	70.0	54.5	80.0	58.5	42.0	383	362	....	
38	69.5	54.0	79.5	57.5	41.0	373	352	....	
37	69.0	53.0	79.0	56.5	39.5	363	342	....	
36	68.5	52.5	78.5	56.0	38.5	353	332	....	
35	68.0	51.5	78.0	55.0	37.0	343	322	....	
34	67.5	50.5	77.0	54.0	36.0	334	313	....	
33	67.0	50.0	76.5	53.0	35.0	325	305	....	
32	66.5	49.0	76.0	52.0	33.5	317	297	....	
31	66.0	48.5	75.5	51.5	32.5	309	290		

SCANNING DRILL 9

THE TURRET IS CURRENTLY SET AT WHAT STATION?

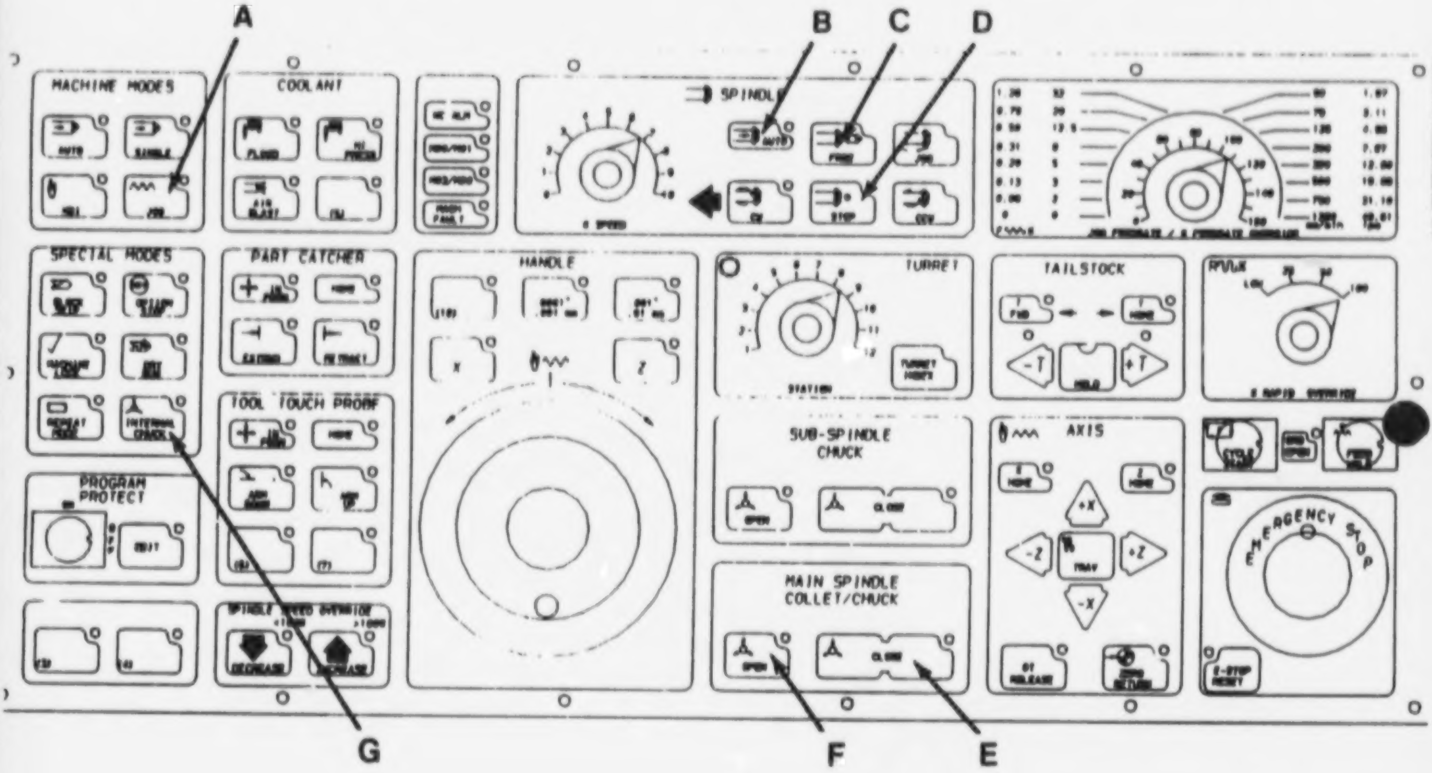
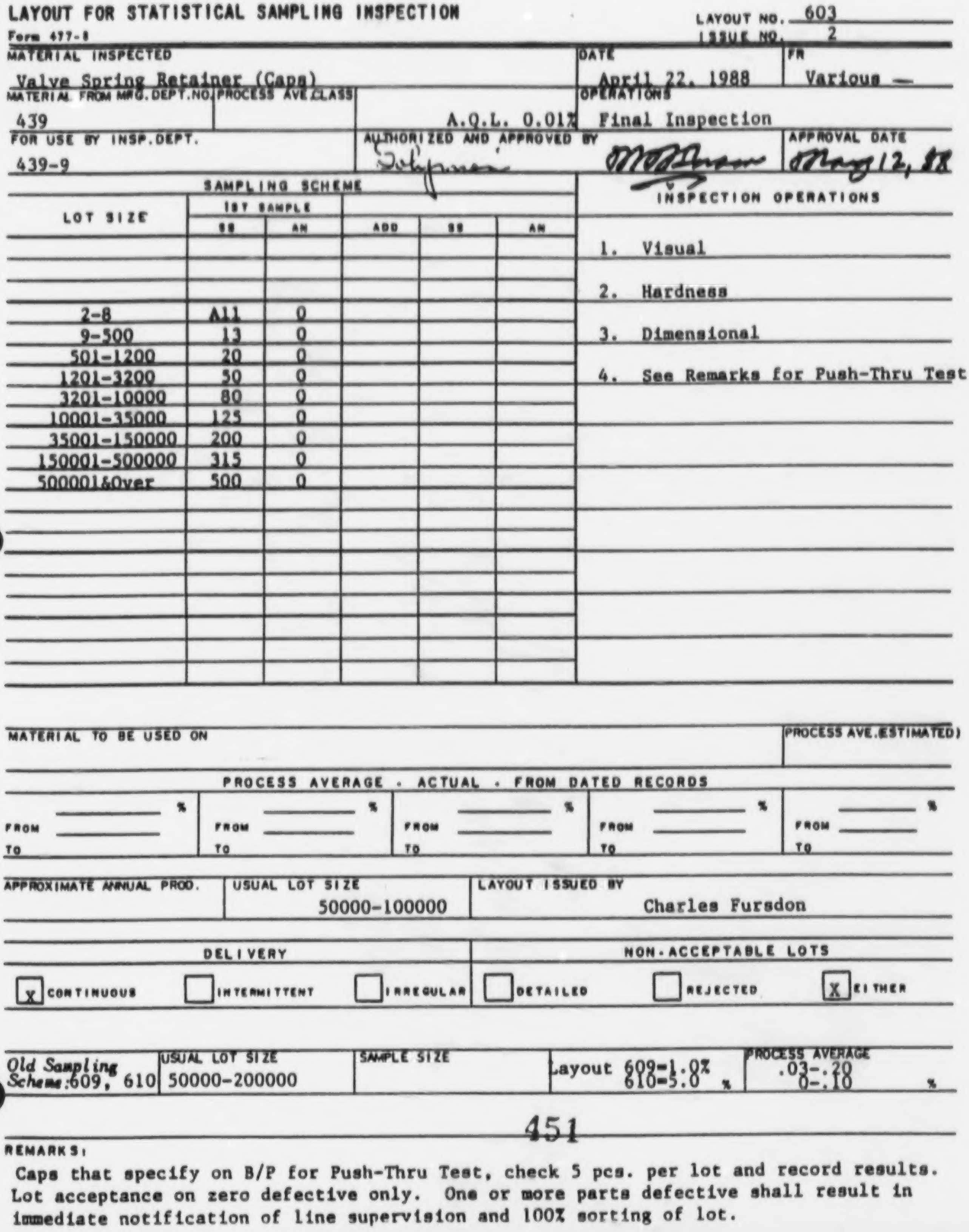


Figure 5.1 - Integrated Machine Control Panel

SCANNING DRILL 10

FOR A LOT SIZE OF 25001 HOW MANY PARTS WOULD BE IN YOUR 1st SAMPLE SS ?



LAYOUT FOR STATISTICAL SAMPLING INSPECTION

Form 477-8

LAYOUT NO. 603
ISSUE NO. 2

MATERIAL INSPECTED Valve Spring Retainer (Caps)	DATE April 22, 1988	FR Various —
MATERIAL FROM MFG. DEPT. NO. 439	PROCESS AVE. CLASS A.Q.L. 0.01%	OPERATIONS Final Inspection
FOR USE BY INSP. DEPT. 439-9	AUTHORIZED AND APPROVED BY Tolypnai	APPROVAL DATE May 12, 88

SAMPLING SCHEME

LOT SIZE	1ST SAMPLE SS	1ST SAMPLE AN	ADD	SS	AN
2-8	All	0			
9-500	13	0			
501-1200	20	0			
1201-3200	50	0			
3201-10000	80	0			
10001-35000	125	0			
35001-150000	200	0			
150001-500000	315	0			
500001&Over	500	0			

INSPECTION OPERATIONS

1. Visual
2. Hardness
3. Dimensional
4. See Remarks for Push-Thru Test

MATERIAL TO BE USED ON

PROCESS AVE. (ESTIMATED)

PROCESS AVERAGE - ACTUAL - FROM DATED RECORDS

____ % FROM ____ TO	____ % FROM ____ TO	____ % FROM ____ TO	____ % FROM ____ TO	____ % FROM ____ TO

APPROXIMATE ANNUAL PROD.	USUAL LOT SIZE	LAYOUT ISSUED BY
	50000-100000	Charles Fursdon

DELIVERY

☒ CONTINUOUS ☐ INTERMITTENT ☐ IRREGULAR

NON-ACCEPTABLE LOTS

☐ DETAILED ☐ REJECTED ☒ EITHER

Old Sampling Scheme: 609, 610	USUAL LOT SIZE 50000-200000	SAMPLE SIZE	Layout 609=1.0% 610=5.0 %	PROCESS AVERAGE .03-.20 0-.10 %

REMARKS:

Caps that specify on B/P for Push-Thru Test, check 5 pcs. per lot and record results. Lot acceptance on zero defective only. One or more parts defective shall result in immediate notification of line supervision and 100% sorting of lot.

COMMUNICATIONS ON THE JOB II
SESSION 4 HANDOUT

Introduction To Statistical Process Control

WHAT IS SPC?

QUALITY CONTROL

Producing a quality product at a competitive price is the goal of any manufacturing operation. Therefore, quality control must be an important aspect of a production process. Product quality can be controlled in two ways.- control by detection- control by prevention in a detection system, a product is inspected after it has been completed. At this point, the purpose of the inspection is to determine whether or not the product is acceptable. If the product is unacceptable, the process is adjusted in order to attempt to bring it more in line with the specifications. In addition, product work that is unacceptable is rejected, reworked, or repaired. And, since the process in not adjusted until an unacceptable product has been produced, a great deal of scrap may be produced before the process is readjusted.

On the other hand, controlling a process through prevention involves monitoring the product during the process. With prevention , measurements are taken while a product is being produced. If the data collected indicates that certain characteristics of the product are changing, the process can be adjusted as necessary. In this way, the production of unacceptable items may be eliminated.

Control by prevention is a basic premise of statistical process control. Continual improvement of quality and productivity may be achieved by using statistical methods. A statistical approach can create an organized, logical system for monitoring and controlling a process. Statistical procedures include collecting factual information needed to make informed decisions about setting a process properly. A process that is not set properly will not produced quality products.

ELEMENTS OF SPC

There are three basic elements of statistical process control.

STATISTICAL The word statistical refers to the selective measurement involves collecting information about the size, weight, or composition of a product. This data can then be organized into a chart which provides a visual picture of process performance. By analyzing this data in the chart, predictions can be made about process performance over time. In this way, process performance can be controlled and continued improvement of the process can be achieved.

PROCESS The term process refer to any activity that produces a product or provides a service. A process is a combination of equipment, manpower, material, method, and environment. Some processes are industrial, others may be administrative, financial, or managerial.

CONTROL In SPC, control is the comparison of actual process performance with a target, or nominal, value. If process performance is not acceptable, controlling the process involves taking appropriate corrective action. In addition, control includes analyzing whether or not these actions have been effective.

The purpose of SPC is to achieved consistency. A consistent process will produce a product with minimal waste, minimal rejects, and efficient use of raw materials and equipment. In order to obtain a satisfactory product, quality must be built in at every stage of the process.

COMMUNICATIONS ON THE JOB II
SESSION 4 HANDOUT

QUALITY COSTS

Implementing SPC will ultimately reduce quality costs.
There are four types of quality costs.

☛ External failure costs are costs that are incurred after an unacceptable product has reached the customer. These costs may relates to returns of the product, requests for replacements, and warranty claims that require repairs and adjustments.

☛ Internal failure costs are incurred after a product has been made, but before it reaches the customer. These costs refer to scrap and unusable raw material from the production process, as well as reworking, refitting, or repair of finished items.

☛ Appraisal costs are costs that are related to inspection functions. The more reliable a process is in terms of producing acceptable products, the less need there will be for inspection of finished products.

☛ Prevention costs relate to measurements and inspections at various stages of the process, permitting adjustments to be made early. In addition to data collection, prevention costs also refer to proper handling and storage of materials, timely and regular equipment maintenance, and effective training of personnel.

In many companies, external and internal failure costs make up the largest portion of total quality costs. Of all the costs associated with producing a quality product, prevention has the greatest potential for reducing the total quality costs. Since SPC is a system based on prevention, using SPC can help reduce quality costs to a minimum. Although using SPC may cause prevention costs to rise slightly, external and internal failure cost will decrease since fewer defective products will be produced. This will significantly reduce overall quality costs.

COMMUNICATIONS ON THE JOB II
POST - ASSESSMENT

1) Name the four Preferred Learning Style categories represented by these initials:

V

A

K

T

2) Name one of the three components of effective learning.

____

3) Mark each statement about listening True or False:

_____ People tend to pay attention to what interests them.

_____ Hearing and listening are the same.

_____ Most people have a short attention span and have trouble concentrating on the same thing for too long.

_____ The speaker is totally responsible for the success of communication.

_____ When a listener's emotional level is high, he or she will be an effective listener.

_____ Listening is a natural process.

_____ Listening is a skill.

_____ Listening requires little energy; it's "easy".

_____ Giving advice and telling the speaker what to do is not a listening skill.

_____ Speaking is a more important part of the communication process than listening.

4) List below 4 study techniques that help people learn more effectively:

____________________ ____________________

____________________ ____________________

5) Describing a persons behavior is more helpful than telling them what kind of a person you think they are. True False

6) When a person labels a behavior good or bad, right or wrong, they are using an "I-Message Approach" to communication. True False

7) Giving a person praise helps them work better. True False

8) Roleplaying is useful in training sessions. True False

9) The dictionary is considered a " power tool ". True False

10) Phonics skills are an important part of adult reading. True False

11) Name two types of dictionaries that are useful everyday.

____________________ ____________________

12) Name 2 components of a dictionary page.

____________________ ____________________

13) How many consonants are in the English alphabet? ____________________

14) The letters **w** and **y** are: (circle one answer)

consonants vowels both consonants and vowels

15) Circle the words with the short **e** sound:

she verse fret Pete

bench these press wed

16) A person's attitude is an important part of the reading process. True False

17) Name two of the four major components of the Reading Process.

18) A person should always try to maintain the same reading speed no matter what they are reading. True False

19) Reading is learned only at an early age. True False

20) A person must read every word to be a "good" reader. True False

21) If you read very fast you should still try to remember everything you read. True False

22) Name three good reading habits.

23) One word can have several different meanings. True False

24) A homophone is a ______________________________

25) Asking a co-worker is an acceptable way to find out what a new technical word means? True False

26) What does CNC stand for?

27) What does SPC stand for?

28) Read the following:

Producing a quality product at a fair price is the goal of any manufacturing plant. Therefore, quality control must be an important aspect of TRW's process. Product quality can be controlled in two ways.

What is the main topic of this reading:

____

____

29) Define the following TRW terms:

Dresser ________________________________

____

Shear ________________________________

____

Collet ________________________________

____

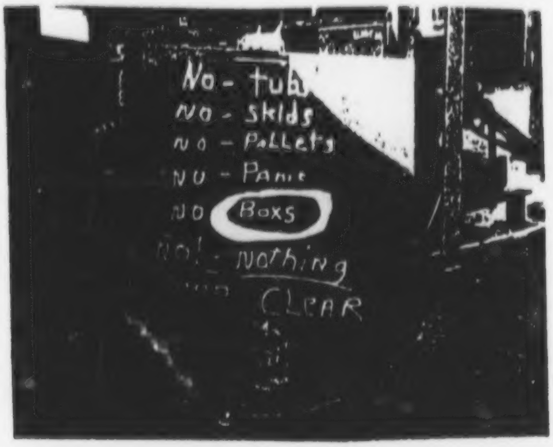
Tolerance ________________________________

____

Process ________________________________

____

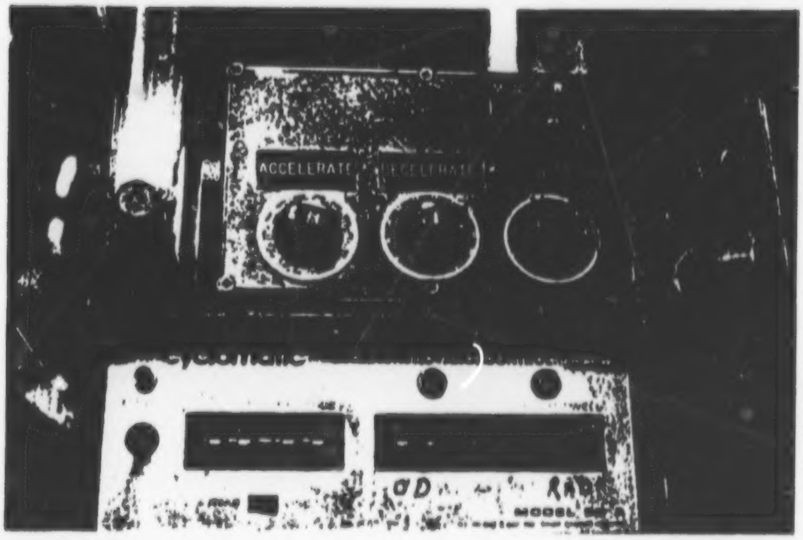
30) What is the proper spelling of the circled word on this sign.



---

31) If you wanted to make this go faster, which knob would you turn ? (circle one)

left center right

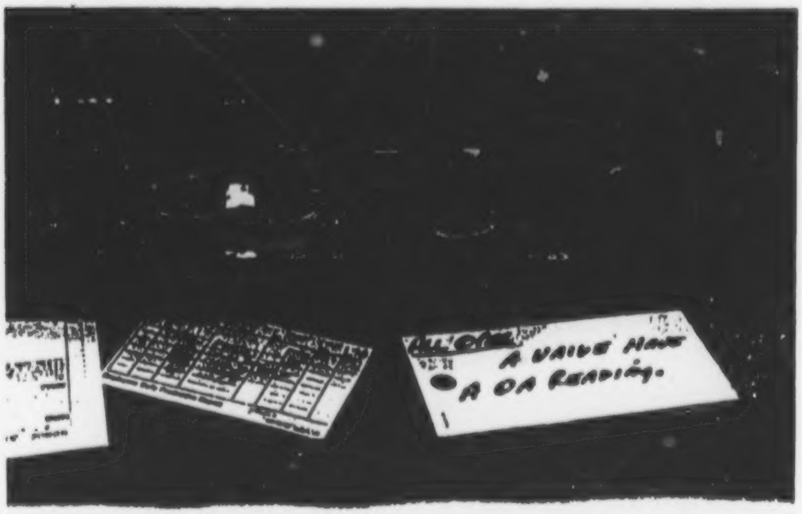


(OVER)

BEST COPY AVAILABLE

25) Is the verb in the sentence on the white ticket correct? Please write the correct verb on the line.

____



TRW

Communications

on-the-job

© 1994, Cuyahoga Community College

This curriculum was developed with support from the US Department of Education, National Workplace Literacy Program. Reproduction of the curriculum in part or total, with the customary credit tot the source, is permitted.

Facilitator Manual

II

TRW COMMUNICATIONS ON THE JOB II

OBJECTIVES

Upon completion of the Communications on the Job II course, the participant will be able to:

- Identify ways to overcome personal obstacles to learning.
- Identify his or her personal learning style
- Demonstrate study skills techniques in various learning situations.
- State components of active listening.
- Identify effective communication techniques when faced with difficult job situations.
- Demonstrate ability to locate specific information in a dictionary.
- Identify situations in which a technical dictionary is needed.
- Demonstrate skills for using a technical dictionary.
- Identify and apply a vocabulary-building system.
- Demonstrate job-related word recognition
- Identify components of the reading process.
- Differentiate between the meanings of common prefixes and suffixes.
- Identify and select synonyms, antonyms, homophones and homographs.
- Demonstrate reading skills of recalling factual information, identifying main topics, and drawing logical conclusions with job-related documents.
- Read and interpret job-related instructions.
- Identify codes and symbols used in schematic and blueprint reading.
- Read, analyze, and prepare job-related memos, processes and procedures.

TRW COMMUNICATIONS ON THE JOB II
SESSION OVERVIEW

10 2-Hour Sessions

Session 1

Self-Awareness and Personal Learning Styles
Pre-Assessment

Session 2

Successful Learning Strategies
Using the Dictionary

Session 3

The Process and Types of Reading
Active and Passive Reading
Skimming and Scanning
Technical Vocabulary Building System

Session 4

Homophones and Homographs
Previewing
Job-related Vocabulary Improvement

Session 5

Prefixes and Suffixes, Synonyms and Antonyms
Identifying Main Ideas, Topics, and Details
Job-related Vocabulary Improvement

Session 6

Following Instructions, Drawing Logical Conclusions
Reading and Writing: Memos, Processes and Procedures
Job-related Vocabulary Improvement

Session 7

Active Listening Skills
Job-related Vocabulary Improvement

Session 8

How to Deal with Difficult Communication Situations
Role-playing Exercise
Job-related Vocabulary Improvement

Session 9

Identifying codes and symbols on schematics and blueprints
Job-related Vocabulary Improvement

Session 10

Review/Wrap-up
Post-Assessment
Evaluation

S:\WSHARE\GRANT\NEWCOME\COM2MOD.TRW

COMMUNICATIONS ON THE JOB II
PRE - ASSESSMENT

1) Name the four Preferred Learning Style categories represented by these initials:

V

A

K

T

2) Name one of the three components of effective learning.

____

3) Mark each statement about listening True or False:

_____ People tend to pay attention to what interests them.

_____ Hearing and listening are the same.

_____ Most people have a short attention span and have trouble concentrating on the same thing for too long.

_____ The speaker is totally responsible for the success of communication.

_____ When a listener's emotional level is high, he or she will be an effective listener.

_____ Listening is a natural process.

_____ Listening is a skill.

_____ Listening requires little energy; it's "easy".

_____ Giving advice and telling the speaker what to do is not a listening skill.

_____ Speaking is a more important part of the communication process than listening.

4) List below 4 study techniques that help people learn more effectively:

____________________ ____________________

____________________ ____________________

5) Describing a persons behavior is more helpful than telling them what kind of a person you think they are. True False

6) When a person labels a behavior good or bad, right or wrong, they are using an "I-Message Approach" to communication. True False

7) Giving a person praise helps them work better. True False

8) Roleplaying is useful in training sessions. True False

9) The dictionary is considered a " power tool ". True False

10) Phonics skills are an important part of adult reading. True False

11) Name two types of dictionaries that are useful everyday.

____________________ ____________________

12) Name 2 components of a dictionary page.

____________________ ____________________

13) How many consonants are in the English alphabet? ____________________

14) The letters **w** and **y** are: (circle one answer)

consonants vowels both consonants and vowels

15) Circle the words with the short **e** sound:

she verse fret Pete
bench these press wed

16) A person's attitude is an important part of the reading process. True False

17) Name two of the four major components of the Reading Process.

____

____

18) A person should always try to maintain the same reading speed no matter what they are reading. True False

19) Reading is learned only at an early age. True False

20) A person must read every word to be a "good" reader. True False

21) If you read very fast you should still try to remember everything you read. True False

22) Name three good reading habits.

____

____

____

23) One word can have several different meanings. True False

24) A homophone is a ______________________________

25) Asking a co-worker is an acceptable way to find out what a new technical word means? True False

26) What does CNC stand for?

____

27) What does SPC stand for?

____

28) Read the following:

Producing a quality product at a fair price is the goal of any manufacturing plant. Therefore, quality control must be an important aspect of TRW's process. Product quality can be controlled in two ways.

What is the main topic of this reading:

____

____

29) Define the following TRW terms:

Dresser ________________________________

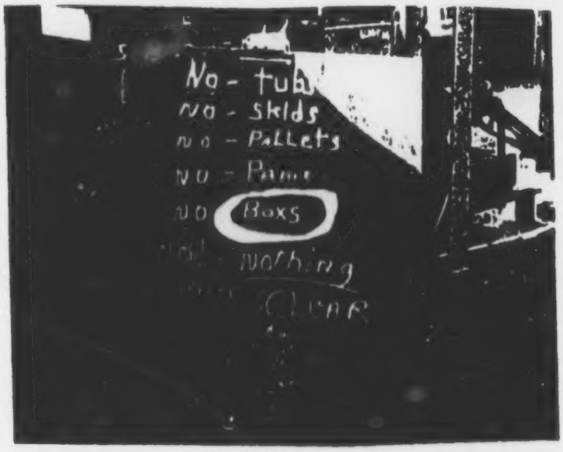
Shear ________________________________

Collet ________________________________

Tolerance ________________________________

Process ________________________________

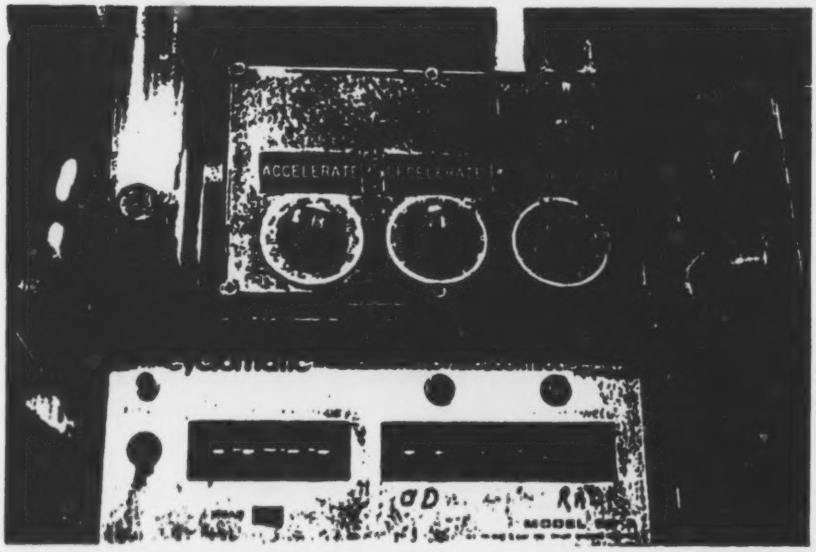
30) What is the proper spelling of the circled word on this sign.



---

31) If you wanted to make this go faster, which knob would you turn ? (circle one)

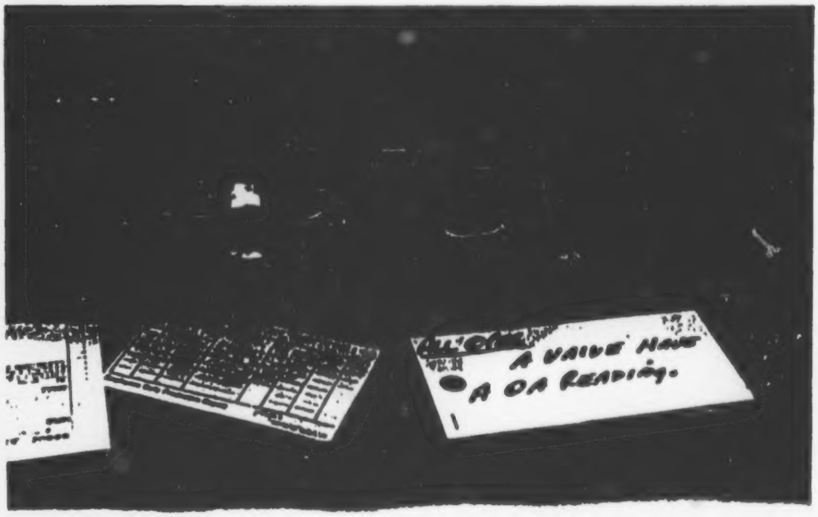
left center right



(OVER)

25) Is the verb in the sentence on the white ticket correct? Please write the correct verb on the line.

____



TRW COMMUNICATIONS ON THE JOB II

OBJECTIVES

SESSION 1

- Self-Awareness and Personal Learning Styles
- Pre-Assessment

COMMUNICATIONS ON THE JOB II

SESSION 1

Self-awareness

Introduce self and course briefly. Have students introduce themselves. Pass out any book or materials needed.

Show the video "The Train" (approximately 8 minutes long) Have students write down the answers to the 3 handout questions listed below. Then take a few minutes to discuss the questions and their reactions to the video.

Questions

What does "The Train" tell you about the power of your mind?

Have you heard of any other examples of people deciding something contrary to "fact" with dramatic results?

To what extent do you feel you control your attitudes? What circumstances do you feel take control away from you, and what would it take to get it back?

Some Reasons Why We Assume We Can't Learn

Keeping "The Train" in mind, let's look at how a limiting mind set affects our perception of our ability to learn. Many people assume they can't learn new things for a variety of reasons. What are some reasons you think people assume they can't learn. (List responses on board.)

Some Reasons Why We Assume We Can't Learn

- **Past Conditioning** - we were told we couldn't learn or that we weren't good at a particular subject or subjects.

- **Stereotypes** - How often have we heard statements like "He's a lathe operator, great mechanical ability, but his verbal skills aren't too good." or "She's wonderful at communicating with others, but technically, I don't think she has it"? In many cases, these statements reflect stereotypes present in our society and our companies. It's easy to buy into them, and create self-fulfilling prophecies so that we fit the stereotype.

Some Reasons Why We Assume We Can't Learn (cont'd)

- **Other People's Perceptions of Us** - Often, we're labelled, usually early in life. "He's the artist" or "She's the smart one" or "He has the mechanical mind." What happens is that we often get pigeon-holed. We also assume that we can only be good at what people tell us we're good at. Or conversely, we assume that we're poor at whatever people tell us we're poor at. We tend to live up (or down, as the case may be) to other people's expectations.

Successful Learning Experience

Ask participants to think of a recent successful learning experience, preferably job-related, but it really could be anything from learning a new sport to learning how to program their VCR. Have them describe this learning experience on the handout provided. Stress that it does not have to be a "classroom" experience. It probably will be something that they figured out on their own, by either reading something or through just hands-on experience, or something that someone else showed them how to do.

When they're finished with the handouts, ask participants to share this learning experience and why they wanted to learn this particular skill or task with the class. Keep track of the "whys" on a piece of paper or the board to work into the next section.

Mention that often we learn when we're motivated to learn. For instance, an immigrant to this country from Malaysia wasn't familiar with the American food, hamburgers. She wasn't sure what went on a hamburger. So, when she ordered a hamburger at a restaurant and they asked her what she wanted on it, she simply said "The works." She ended up eating all kinds of things like onions and ketchup that she didn't like. She finally decided to learn what went on hamburgers and what she liked. Eventually, when asked what she wanted on her hamburger, she was able to reply "Mustard and pickles, please." What was her motivation for learning?

Successful Learning Experience (cont'd)

Some Motivating Factors

As you discuss this, categorize the participant's "whys" of their successful learning experiences in each of these categories.

- **Money** - People will often learn new skills in order to gain a promotion or to get a new higher-paying job.
- **Comfort** - People are motivated to learn new skills if it will make their jobs easier.
- **Safety/Health** - If a skill is necessary to their safety or health, people usually view that skill as an important one to learn.
- **Status** - People will often learn new skills if they believe it will increase their status with their supervisor, their co-workers, and/or family and friends.

Personal Learning Styles

Not everyone learns most effectively in the same way. For instance, some people can learn how to operate machinery by watching a demonstration of it while others would learn best by reading the manual. Additionally, different skills need different learning styles. You can read the manual from cover to cover and learn all that's there, but until you actually operate the machine yourself, you really won't know how to operate it. So, while watching a demonstration or reading the manual may be a good starting point, eventually to master the skill, you're going to have to get some hands-on experience.

- **Visual** - Learns best through observation or studying graphs or charts. If you feel you learn a lot from demonstrations or you like to look at graphs, drawings, charts, maps, etc. in order to understand something, you may be a visual learner.
- **Auditory** - Learns best through listening. If you get a lot from lectures or like to listen to educational audiotapes at home or in your car, chances are you're an auditory learner.

- **Kinesthetic** - Learns best through movement or while moving. If you like to walk around or knit or tinker while listening to educational material or if you feel you're pretty good at picking up new sports moves after just one or two tries, it's a good possibility that you're a kinesthetic learner.

- **Touch** - Learns best through touch or "hands-on" experience. If you're the type of person who wants to just start operating a piece of equipment, or who wants to touch or feel objects to get a better sense of them, you're most likely a touch learner.

- **Olfactory** - Learns best through smell or taste. If you often associate things with a particular smell or taste, you very well might be an olfactory learner.

Preferred Learning Methods

- **Print/Individual** - Learns best through reading and writing. If you love to read and feel you learn a lot from manuals, magazines and books, you may be a print-oriented learner who likes to learn things on their own.

- **Interactive/Group** - Learns best through talking things out with other people. If you feel you learn a lot from small group discussions or by bouncing ideas off people, you may be an interactive learner.

To help them find out what kind of learners they are, have them complete The Learning Style Inventory. When they're finished, use The Learning Style Inventory Interpretation included on the next page in the handouts to help them interpret their inventory. Remember to mention, that's possible to have 2 styles of learning that are equally dominant. Ask them if they learning style identified with this inventory matches the learning style they think they are.

COMMUNICATIONS ON THE JOB II
SESSION 1

WHAT KIND OF LEARNER AM I?

Learning Style Inventory

Check below the techniques through which you think you learn best.

___ 1. motion pictures
___ 2. lecture, information-giving
___ 3. group discussions
___ 4. reading assignments
___ 5. role playing with you as a participant
___ 6. project construction
___ 7. odor discrimination activities
___ 8. television programs
___ 9. audiotapes
___10. participant in panel discussion
___11. written reports
___12. nonverbal/body movements
___13. drawing, painting, or sculpting
___14. tasting
___ 15. slides
___ 16. records
___ 17. question-answer sessions
___ 18. independent reading
___ 19. physical motion activities
___ 20. model building
___ 21. scented materials (i.e., scratch & sniff)
___ 22. graphs, tables, and charts
___ 23. recitation by others
___ 24. interviews
___ 25. writing
___ 26. participant in physical games
___ 27. touching objects
___ 28. photographs

COMMUNICATIONS ON THE JOB II
SESSION 1

WHAT KIND OF LEARNER AM I?

Learning Style Inventory
Interpretation

Circle the numbers you checked on the Learning Style Inventory. Find the row where the most numbers are circled and identify the learning style to the right of it. Most likely, that's your dominant learning style. It is possible to have 2 learning styles with the same or almost the same number of circles. In that case, you probably utilize both learning styles equally well.

NUMBERS	LEARNING STYLE
1, 8, 15, 22, 28	VISUAL
2, 9, 16, 23	AUDITORY
3, 10, 17, 24	INTERACTIVE/GROUP
4, 11, 18, 25	PRINT/INDIVIDUAL
5, 12, 19, 26	KINESTHETIC
6, 13, 20, 27	TOUCH
7, 14, 21	OLFACTORY

COMMUNICATIONS ON THE JOB II

SESSION 1

Learning Styles Activity

Have the class read through the following scenario and see if they can identify the learning styles of Tony and his supervisor, John. Also, identify any problems differences in learning styles caused in this instance.

Tony works for the Excellent Products Company operating a drill press. Recently, his company automated all the drill presses in the plant. Tony, along with all the other drill press operators must now learn to operate the automatic controls. Tony has been running the drill press for 5 years. Because he feels that the automation will make him more productive and allow him to learn new skills, he's sure he can learn to work with the automatic control system. The big question, of course, is how?

Tony's supervisor, John, brings him a copy of the big, thick manual that came with the new machinery.

"Everything you need to know is right in there," says John. "Read it."

Tony tries to read it. But it seems boring to him. What he does find useful are the drawings and charts. After a week of trying to read the manual, Tony decides to talk to John.

"I could look at this manual from now till retirement and never learn what to do. I need someone to show me how to use this thing!"

John said he understood and the next day, he worked with Tony. John patiently explained everything he knew about the machine to Tony. Tony kept wanting to push the buttons and check out the information for himself. Sometimes, although Tony didn't admit it to John, he felt lost by John's explanations.

When he was done explaining everything to Tony, John asked him to repeat the steps for certain operations. Tony couldn't do it successfully. "Walk me through it," he kept saying.

"I just did," insisted John.

Learning Styles Activity (cont'd)

"Well, if I could just try it one time, then I think I'll be able to remember it better," said Tony.

"No," said John, "Until you learn what to do, we can't take a chance on damaging the new machinery."

John walked away rather exasperated. Tony was left feeling very frustrated. "If I could just watch someone operating one of these babies, then I could pick it up," he thought.

The next day, Tony decided to take another route to learning the automated controls. He talked to some of the other drill press operators and found that one of the younger operators, Nancy, was skilled at operating automatic controls because of some vocational training.

Tony asked Nancy if he could watch her in action. "Sure," Nancy said.

That afternoon, Tony went over to Nancy's drill press. she first explained what she was going to do, then did it. Tony kept track of the buttons she pushed and in what order. "Can I try it?" he asked when she was done with the demonstration.

"Of course," said Nancy. "I'll cancel the program I just did and you start from scratch."

"Thanks," said Tony. He approached the controls. He was amazed when he remembered practically the whole sequence of events. Nancy just had to prompt him a couple of times.

"See, nothing to it," said Nancy when he finished successfully.

"Yeah, nothing to it," said Tony. "Wonder why it seemed so hard yesterday?" he thought.

Every day for a week, Tony worked with Nancy until he had all the basic operations down. John came by and saw Tony operating the automatic controls with skill and ease. "Really dug into that manual, didn't you, Tony?" he said. "I was beginning to think you were a hopeless case. Good job."

COMMUNICATIONS ON THE JOB II
SESSION 1

Learning Styles Activity (cont"d)

What kind of learner is Tony? Is there more than one style you can identify for him?

Haptic - wants to push buttons, operate the machinery. Also, visual - benefitted from someone showing him how to use the equipment and found the graphs and drawings in the manual helpful.

What kind of learner do you think John is? What kinds of problems did this cause between John and Tony?

John is a print learner. His first impulse is to read the manual and learn everything there is to know about the machine before actually operating it. While this might work for John, it doesn't work for Tony. John thinks everyone learns like he does. So when Tony can't learn effectively from the manual, John assumes (wrongly, of coursel) that Tony simply can't learn.

Summary

In order to learn effectively, you must

- **Believe in yourself.**

As we've discussed, it's important to have the right attitude toward learning. You have to expect that you can learn, and you will. Of course, it won't always be easy, but with the right attitude, you can overcome any obstacles in your learning path.

- **Be motivated.**

As adults, it's important to motivate ourselves. Being motivated helps to maintain the right attitude. In order to keep ourselves motivated, it's important to know what we, as individuals, are going to gain from the training. Everyone will gain something a little different. It's also important to know why we, individually, are going through the training

- to improve certain skills, to improve our jobs. In other words, what are the consequences for us to complete this training successfully.

COMMUNICATIONS ON THE JOB II
SESSION 1

- **Be aware of your personal learning style and take advantage of it, whenever possible.**

Knowing how you feel most comfortable learning will help you to get more out of this class, faster and more effectively. You certainly will be exposed to a variety of learning methods, but take advantage of your own learning styles whenever you can, during individual and lab study times in this class, and certainly on the job. Having this understanding about how we learn and realizing that everyone learns differently helps to keep us motivated through the learning process and helps to avoid some conflicts that commonly arise when working with others.

OBJECTIVES

SESSION 2

- Successful Learning Strategies
- Using the Dictionary

COMMUNICATIONS ON THE JOB II

SESSION 2

SUCCESSFUL LEARNING STRATEGIES

Study Skills Techniques

Now, that we know how to get a positive attitude toward learning, how to keep motivated and how to use our own personal learning styles, we're going to talk briefly about study skills techniques that we can use to help us get the most out of this course and others.

We'll be talking about the following 4 study skills techniques:

- Organization
- Concentration
- Notetaking
- Memory Improvement

Organization

In order to be successful in this class (and others), it's important to:

- Set a goal
- Plan how to reach that goal
- Act upon your plans

Each of these 3 steps is essential to success. If you set a goal, but never act on it, you won't be successful. And, if you just start taking action, without planning, you'll just spin in circles, and probably won't be successful either. In this class, we're going to help you with all 3 steps.

First, have students write down personal goals that they have for the Communications on the Job II class on the handout provided. These are for students' personal use and are not to be shared with the class. To help them, you may want to go over or suggest that they review course objectives.

COMMUNICATIONS ON THE JOB II

SESSION 2

Concentration

The next important study skill we want to use is concentration. It's going to be important to concentrate in class and when doing individual work. Concentration allows us to be much more efficient and learn more effectively. When we concentrate, we don't have to ask another participant what the instructor was talking about while were daydreaming, and we don't have to read and reread instructions or books, because our mind wandered off somewhere in mid-sentence. The ability to concentrate is important to learning success.

What is concentration? Summed up briefly, concentration is thinking. When we're thinking about something and aren't aware of distractions going on around us and we're deeply involved in understanding the concepts, we're concentrating. Once we become aware that we're concentrating, however, we no longer are. Or if we start to notice little noises or listen to the conversations around us, we're not concentrating anymore. To sum up, consider this quote:

> *Consider the postage stamp. It secures success through its ability to stick to one thing until it gets there.*
>
> *-- Josh Billings*

Concentration Activity

Either read or have students read the concentration activity scenario. Ask what seems to be Pat Hawkins' problem? What kinds of things indicate that he's having trouble concentrating?

Use the concentration activity to tie in the next section on what breaks our concentration.

COMMUNICATIONS ON THE JOB II

SESSION 2

Concentration Activity

Pat Hawkins is about 2 weeks into his training program. He's started with Basic Math, a subject he feels he's never been good at. His supervisor told him that Math skills will become more important as improvements to the equipment are made at work. But Pat feels that he's survived this long without math skills, why should he learn them now?

When Pat comes into the learning lab, he picks up the resources he needs, takes off his coat and wanders over to a workstation, thinking to himself, "Oh, here comes 2 hours of boredom. I'd rather be home, eating dinner with my family, or bowling with the guys."

After arranging his resources and notebooks, he decides he needs a cup of coffee. So, he goes to the coffee machine. In the dining room, a TV is on with the news. He watches the news for 10 or 15 minutes while he sips his coffee. On his way back to the learning lab, he thinks about the news events he just saw and wonders "what the world's coming to."

He goes back to his workstation, realizes he didn't bring a pen or pencil, so he goes into the office to get one. He chats for 5 minutes with one of the secretaries.

Then, he returns to the workstation and looks at his watch. A half hour has passed already. "Good," Pat thinks, "Only one and a half more hours of this." He works 2 or 3 problems. Then, he starts to think about the argument he and his wife had this morning. It's been bugging him all day. He knows he needs to talk to her again more calmly and rationally. He starts planning what he'll say to her.

Then, Pat realizes he's cold. He's only wearing a short-sleeved T-shirt. He rubs his arms and then gets up to get another cup of coffee. In the dining area, he sees one of his co-workers. They start talking about the day's events at work and how tough it is to work and go through this training at the same time. Pat glances at his watch. Only about 45 minutes left to study.

He goes back to his workstation. He reviews his notes and tries to go through the examples, but he keeps thinking about what he'll say to his wife when he gets home. He hits an example problem that makes no sense to him. After going over it a couple times, he looks at his watch. Only 15 minutes left.

Concentration Activity (cont'd)

"Well, I'm going to call it a day--this is a good stopping point," he says to himself and leaves. On his way out the door, he shakes his head and thinks, "It's going to take me forever to get through this Math class, 2 hours is hardly enough time."

What Breaks Our Concentration?

As you go over this section, give the examples listed for each category, then ask the students if they can think of others. Write these on board. Also, ask them is they can identify any of these factors as culprits in breaking Pat Hawkins' concentration. For example, ask what external factors broke Pat Hawkins' concentration? (TV, chatting with co-worker, not having pencil, etc.)

- **EXTERNAL DISTRACTIONS**

Some examples: uncomfortable chairs, lighting, noise

- **INTERNAL DISTRACTIONS**

Some examples: personal problems, daydreaming

- **PHYSICAL FACTORS**

Some examples: hunger, thirst, tiredness, illness

- **MENTAL FACTORS**

Some examples: boredom, negative attitude

COMMUNICATIONS ON THE JOB II

SESSION 2

Ways To Increase Concentration

There are, of course, ways to increase your concentration, and get past the physical and mental distractions that creep in:

- Keep your goal in mind.
- Develop an interest in and a positive attitude about the material.
- Eliminate or minimize distractions beforehand.
- Think about successes you've had or success you're determined to have. Then, get to work.

CONCENTRATION HINT: You can will yourself to concentrate and then practice. Start by telling yourself to concentrate for just 5 minutes. Then you can gradually increase your concentration time. Soon, concentration will become a good habit.

Activity - Good Model

Let's figure out what Pat Hawkins' study session would have been like if he applied some of these concentration techniques. Have the class come up with some things they think he could do. Then, refer them to the good model and briefly go over.

Concentration Activity

Pat Hawkins is about 2 weeks into his training program. He's started with Basic Math, a subject he feels he's never been good at. His supervisor told him that Math skills will become more important as improvements to the equipment are made at work. Even though Pat feels he's survived this long without math skills, he knows that more is going to be expected from him on the job when the new equipment is installed. He knows it's going to be a struggle, but on the way to the learning lab, he mentally prepares himself to learn and succeed at Basic Math.

Before he leaves work, Pat makes sure he has everything he needs his notebook, a pencil and eraser, a snack of crackers, cheese and fruit, and a light sweater.

Concentration Activity - Good Model (cont'd)

When he arrives at the learning lab, he takes off his coat and puts on the sweater. He takes his notebook to the dining area, eats his snack, has something to drink and goes over his notes from the last session, ignoring the news on the TV. As he walks back to the learning lab, he feels prepared. He checks out the resources he needs and goes to a workstation where he feels comfortable.

The argument that he had with his wife this morning comes into his mind. It's been bugging him all day. He tears off a piece of notebook paper and writes down what the argument was about and his solution, talk to her calmly and rationally. "I'll think about what I'm going to say in the car on the way home," he tells himself. Then, he gets down to business.

First, he reviews his notes, making sure to work through the example problems. There's one in particular that gives him some problems, so he marks it to ask the instructor about in the next class session.

Now, he's ready to tackle problems. He works through the problems in the first section of the software. Before starting the second section, though, he decides he needs a short break. He looks at his watch, about 45 minutes left, enough time for a 10-minute break.

He goes into the dining area where he sees a co-worker. He chats with him about the day's work events but lets him know that he can't talk long because he wants to finish the next section before leaving today. The co-worker comments on his motivation and persistence. "It's hard," Pat tells him, "but I look at it as an opportunity. I don't know how all this will fit together with our jobs, but I think I'll be better prepared for the new equipment if I learn this now." Pat keeps track of the time and at the end of 10 minutes, he tells his co-worker he has to go.

He returns to the workstation and works the problems in the second section of the software. Walking out of the building, Pat has a sense of confidence in his ability to learn. And when he gets in the car, as promised, he starts thinking about what to say to his wife. He feels that he'll be able to work out the situation with her, now that he let it simmer in the back of his mind for a while and came to it fresh.

COMMUNICATIONS ON THE JOB II
SESSION 2

Notetaking Tips

Another study skills technique that can help us get more out of this class and any learning experience is to take good notes and use them to refer back to.

The following tips are general ones, regarding notetaking:

- ☐ **Listen actively** - Good listening skills are important for taking good notes.
- ☐ **Don't try to write down every word the instructor says** - Abbreviate when possible and summarize. The most valuable notes to you are the ones in your own words.
- ☐ **Be neat and organized** - After all, what good are a bunch of messy, sloppy words that you won't be able to understand later? On the other hand, don't get too hung up on neatness. A word crossed out here or there or an arrow or two is OK, as long as it's understandable.
- ☐ **Review your notes daily** - Preferably, review them right after class. Just a quick 5-10 minute review will help you to retain the material a lot longer.

Examples:

They have 2 pages which are examples of neat, concise notetaking. Go over each one, pointing out the organized format which makes it easier to review notes as well as easier to take them. Also review the use of abbreviations, and a column that can either be filled out in class, if there's time or during a quick review, to ensure understanding (In Vocabulary example, it's the My Sentence column, in Using the Dictionary example, it's the Example column.) Stress the importance of putting notes into own words and checking understanding of notes by doing something like making up a vocabulary word sentence. Also, mention the layout of the handouts used in this class -- plenty of white space everywhere for notes and in some cases, even specific blanks left for notes on class discussions.

COMMUNICATIONS ON THE JOB II
SESSION 2

Notetaking Examples

Vocabulary Words

Word	Pronunciation	Meaning	My sentence
Variable	Var e bel	Measurable quantities such as dimensions or weight	Two variables that I need to check are the diameter and thickness of the valve tip.
Probability	prob e bil i te	The chance that something will or will not happen	The probability of process problems increases when we use a new material for the first time.

Using the Dictionary

Recall Words	Notes	Examples
Spelling	Spelling - entry word shows - sometimes more than 1 sp. - more common sp. given 1st.	theater or theatre
Plurals	Plurals - most nouns show by -s or -es - irregular plurals in dict. - shown by pl. before plural form	mouse - pl. mice

Memory Improvement

Just as there are personal learning styles, there are also different types of memory. You probably use all three types but you also probably have one that's more dominant.

Three Types of Memory

☐ Visual

☐ Auditory

☐ Kinesthetic

Do the following quick exercise so participants can get an idea of what memory type is their dominant one:

Tell them you'll say a list of 5 words. After each word, they're to write down the first word that comes into their mind that they think would help them remember that word.

The list of 5 words

Art

Work

Ship

Land

Store

If they wrote down words that are concrete visual images, such as painting for art or sail for ship, they most likely have a dominant visual memory. If they wrote down sound-alike words, such as cart for art and slip for ship, they most likely have a dominant auditory memory. If they wrote down "feeling" or "describing" words such as beautiful for art or wet for ship, they most likely have a dominant kinesthetic memory.

COMMUNICATIONS ON THE JOB II
SESSION 2

Memory Improvement (cont'd)

Now that we know which type of memory is our strongest, let's go over some general tips for improving memory that people with all types of memories can use.

General Tips to Improve Your Memory

☐	**Interest -**	It's much easier to remember information about what interest you.
☐	**Selection -**	It's a lot easier to remember the important points made, rather than to try and remember all the details given.
☐	**Attention -**	You need to give your full attention to something that you want to remember.
☐	**Understanding -**	If you understand something, you'll remember it a lot easier.
☐	**Intention to - Remember**	You need to tell yourself that you want or need to remember something.
☐	**Confidence -**	Have a positive mental set -- see yourself as a person with a good memory.
☐	**Association -**	Connect things in your mind.
☐	**Background of - Experience**	You'll more easily remember new things about a topic if you already know something about that topic.
☐	**Organization -**	Group things you have to remember in a logical fashion.
☐	**Practice -**	The more you practice, the better your memory will be.

Memory Systems

Now let's take a look at some memory systems that you can use to improve your memory. You can use whichever systems you feel would work for you. You may use just one or you may use more than one.

Memory Systems

☐ **Observation -** The more and better you observe or study something, the easier it will be to remember.

In other words, if you look at something for a minute or two rather than 30 seconds, you're more likely to remember it.

☐ **Visualizing/ - Imaging** Picturing something helps us to remember it better. Concrete items are easier to visualize than abstract ideas.

To illustrate this, have them visualize the following 2 items:

* A valve

* Putting quality into your work

Ask them which one was easier to see in their minds.

☐ **Association -** It's easier to remember new information when you associate it with something you already know.

For example, you can remember how to spell piece, by remembering the first three letter spell the word pie and whenever you think of piece, think of a piece of pie. Or remembering the shape of Italy by thinking of a boot.

Memory Systems (cont'd)

☐ **Substitution** - Think of and picture a word or group of words that sound like or remind you of what you want to remember. This technique works well for abstract concepts.

For example, to remember Minnesota, you can think of a small bottle of soda -- a mini-soda. Or you can remember the word HOMES in order to remember the names of the Great Lakes (Huron, Ontario, Michigan, Erie, Superior) Mention that using other phrases like HOMES to remember a series of things is called mnemonics.

☐ **Classification** - Divide items into logical groups. It's much easier to remember three or four groups of four to six items each than one large group of twenty to twenty-five items.

For example, remembering a grocery list according to categories such as meat, dairy, produce, pasta rather than just trying to remember the whole list.

☐ **Mneumonics** - This type of memory improvement system is named after Mnemosyne, the goddess of memory. Using a self developed system, that will differ in each case, the learner devises a " mneumonic " to recall longer lists, words, etc.

For example, you know that you will be asked to write down each component of the General Tips on page 15.

A mneumonic to remember the steps in order might be:

EXAMPLE:

I
S aw
A n
U nusual
IR regular
C at
A t the
BE ach
O n
P arade

This helps you begin by writing down the first letter of each step in the correct order. Then use these first letters to make up a sentence easy to remember. Sometimes the crazier the sentence, the better. Then this list of first letters in this order can jog into memory the proper words for each step: Interest, Selection, Attention, etc.

Some of these are famous and used frequently. Can the class think of any that they learned. "Every Good Boy Does Fine" for the E G B D F lines on the musical staff. Or how about "Please Excuse My Dear Aunt Sally" for the order of operations Parentheses, Exponents, Multiplication, Division, Addition and Subtraction in math class?

Memory Exercise

If time, have them try the following memory exercise. If there's not time, tell them to try the exercise on their own -- they'll be amazed at how well they can remember!

Use the substitution technique to memorize the ten memory principles. Each is listed below with a space next to it for you to draw a picture or write a word which will help you remember each item. After you've completed your substitutions, take a few minutes to memorize, then flip this page over and surprise yourself at how well you remember the ten memory principles.

1. Interest ______________________
2. Selection ______________________
3. Attention ______________________
4. Understanding ______________________
5. Intention to Remember ______________________
6. Confidence ______________________
7. Association ______________________
8. Background of Experience ______________________
9. Organization ______________________
10. Practice ______________________

COMMUNICATIONS ON THE JOB II

SESSION 2

Memory Exercise (cont'd)

Here's an example of how the memory exercise works.

1.	Interest	% percent symbol
2.	Selection	Imagine yourself selecting an object you like such as a piece of candy from an assorted box of chocolates
3.	Attention	Think of a soldier standing at attention
4.	Understanding	Picture a person under a stand
5.	Intention to Remember	Imagine a person in a tent with a light bulb over his or her head
6.	Confidence	Picture a person with their chest out
7.	Association	Imagine an association you belong to
8.	Background	Think about someone lying on their back on the ground
9.	Organization	Picture an organization chart, or an open file drawer that is organized.
10.	Practice	Imagine someone practicing on a musical instrument or practicing a sport.

COMMUNICATIONS ON THE JOB II
SESSION 2

INSTRUCTOR OUTLINE

Participants have numbered statements and blank space for notes

Keep a dictionary within easy reach

DISCUSSION

Tom Peters the management guru recognized the importance of this factor in a speech. He said that he had One of those beautiful big dictionaries that never got pulled off the shelf to use. He placed it on a stand in a prominent place and claims that if you can't help tripping over it you'll use it. Can you remember seeing one of those amazingly big dictionaries in a library from your childhood or even now? Don't they get used because of their accessibility?

497

COMMUNICATIONS ON THE JOB II
SESSION 2

PRACTICE ALPHABETICAL ORDER

DISCUSSION

All dictionaries are arranged in alphabetical order. Imagine trying to find a word in a 500,000 word dictionary with a simple system of order. So working quickly with the alphabet makes dictionary use easier. If you have to say the entire alphabet to find a particular letter, this will slow you down too much. Dividing the alphabet into sections can help. Then grouping the letters can lead to the approximate area of the dictionary in which to start the word search.

Two ways that might help:

If the word begins with b, look toward the front
If the word begins with m, look toward the middle
If the word begins with s, look toward the back of the dictionary

Another method groups the letters of the alphabet into sections:

1. A B C D E F G
2. H I J K
3. L M N O P
4. Q R S T U V
5. W X Y Z

Now practice picturing these sections in your mind. The next time you need to look something up in the dictionary, the phone book, the glossary of a manual, or a street name on a map.

COMMUNICATIONS ON THE JOB II

SESSION 2

PUTTING WORDS IN ALPHABETICAL ORDER

DISCUSSION Keep the alphabet and the techniques above in mind when alphabetizing words, names etc. Practice with putting words in order helps when finding a word quickly.

Participants should place words in order on the lines provided on their page. They may need guidance as to crossing words off first list as they are placed in alpha order on the line etc.

Alphabetize these TRW words.

angular
blend
chrome
dresser
extrude
forge
gage
hub
idlers
jam
mike
profile
shaved
taper
valve
wheel

If words all begin with the same letter then the second letter determines the alphabetical order.

Words can share the same first, second and possibly third letters. It then becomes **the first letter that is different** that determines the alphabetical order.

COMMUNICATIONS ON THE JOB II
SESSION 2
PRACTICE

If words all begin with the same letter, then the second letter determines the alphabetical order.

Circle the letter or letters in the words that determine how these words were ordered:

" G" List

gage

generator

girder

girth

grind

grinder

groove

ACTIVITY 1 Activity 1 will give some hints, techniques and practice with alphabetization. Some people seem to have an easier time with this. It is a skill that can be reviewed and improved.

COMMUNICATIONS ON THE JOB II
SESSION 2

ACTIVITY 1

Alphabetize a set of TRW Employees Daily Production Reports.

HINT: Separate (and alphabetize) these names in groups then rearrange them in alphabetical order.

Example:
- Names beginning with " Robb"
- Names beginning with " Robert"
- Names beginning with " Robi"
- Names beginning with "Rod" and so on...

Key to Alphabetization Activity

Robberstein, D

Robbins, M

Roberts, J

Robertsen, J

Robertson, T

Robin, A

Robinson, G

Rodgers, K

Rodriguez, H

Rodriguez, R

Rogers, S

COMMUNICATIONS ON THE JOB II

SESSION 2

USING THE DICTIONARY WITH EASE

DISCUSSION

It is easy to assume that adult learners are skilled in the routine use of the dictionary. Yet many people have worked hard to avoid using the dictionary. Time constraints in the course prevent in depth exploration of some essential English language components. We will not teach parts of speech. This will come up in the review of the dictionary page. Please spend time depending on the needs of your class while keeping in mind the overall time constraints of the sessions. Parts of speech will surface later in suffix session and may be further tied to the dictionary skills at that time.

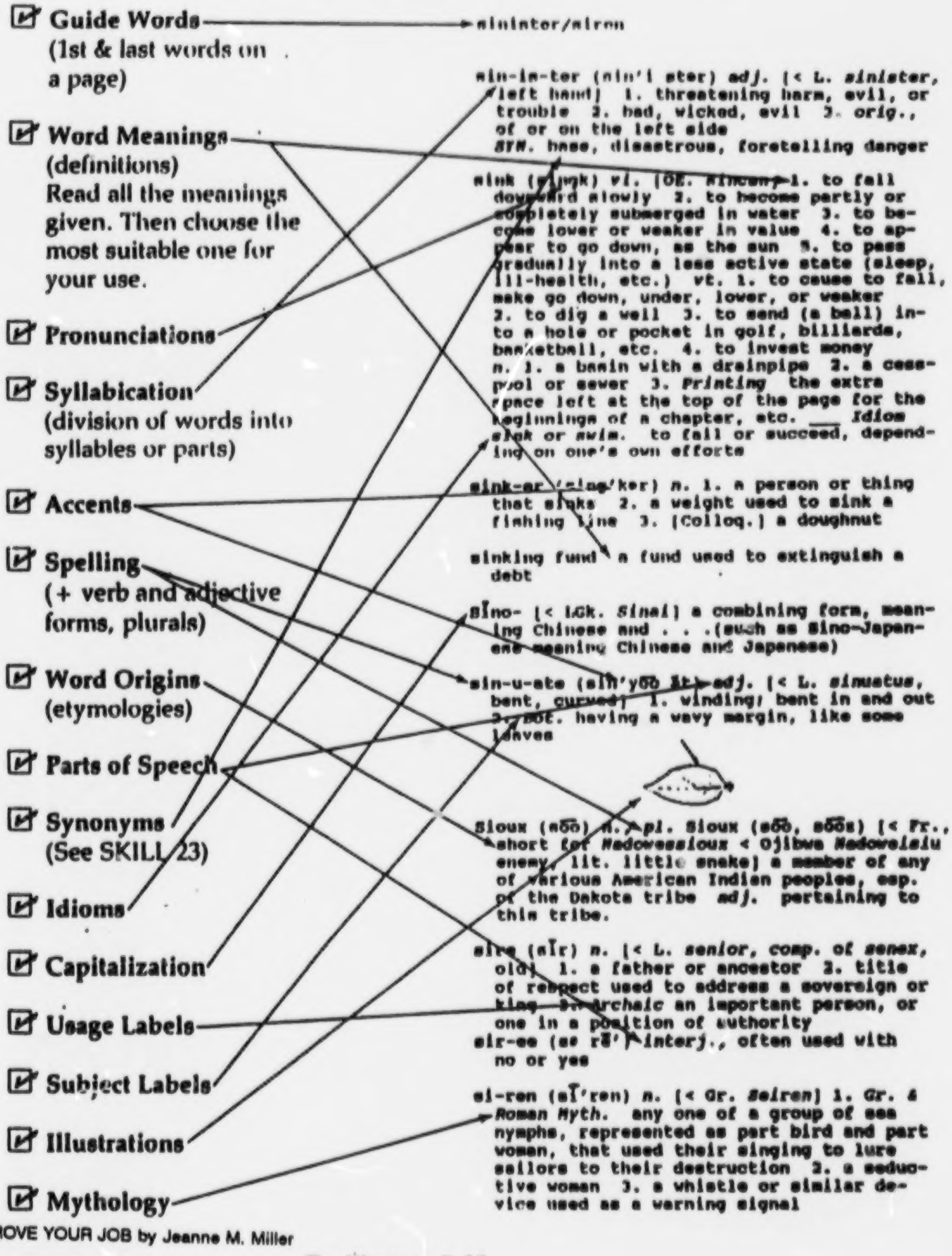
Review the components of a dictionary page

COMMUNICATIONS ON THE JOB II

SESSION 2

The Dictionary

15 Ways a Dictionary Can *Energize* Your Reading



- ☑ **Guide Words** (1st & last words on a page)
- ☑ **Word Meanings** (definitions) Read all the meanings given. Then choose the most suitable one for your use.
- ☑ **Pronunciations**
- ☑ **Syllabication** (division of words into syllables or parts)
- ☑ **Accents**
- ☑ **Spelling** (+ verb and adjective forms, plurals)
- ☑ **Word Origins** (etymologies)
- ☑ **Parts of Speech**
- ☑ **Synonyms** (See SKILL 23)
- ☑ **Idioms**
- ☑ **Capitalization**
- ☑ **Usage Labels**
- ☑ **Subject Labels**
- ☑ **Illustrations**
- ☑ **Mythology**

sinister/siren

sin-is-ter (sin'i ster) *adj.* [< L. *sinister,* left hand] 1. threatening harm, evil, or trouble 2. bad, wicked, evil 3. *orig.,* of or on the left side
SYN. base, disastrous, foretelling danger

sink (siŋk) *vi.* [OE. *sincan*] 1. to fall downward slowly 2. to become partly or completely submerged in water 3. to become lower or weaker in value 4. to appear to go down, as the sun 5. to pass gradually into a less active state (sleep, ill-health, etc.) *vt.* 1. to cause to fall, make go down, under, lower, or weaker 2. to dig a well 3. to send (a ball) into a hole or pocket in golf, billiards, basketball, etc. 4. to invest money *n.* 1. a basin with a drainpipe 2. a cesspool or sewer 3. *Printing* the extra space left at the top of the page for the beginnings of a chapter, etc. ___ *Idiom* *sink or swim.* to fail or succeed, depending on one's own efforts

sink-er (siŋ'ker) *n.* 1. a person or thing that sinks 2. a weight used to sink a fishing line 3. [Colloq.] a doughnut

sinking fund a fund used to extinguish a debt

Sīno- [< LGk. *Sinai*] a combining form, meaning Chinese and . . .(such as Sino-Japanese meaning Chinese and Japanese)

sin-u-ate (sin'yoo āt) *adj.* [< L. *sinuatus,* bent, curved] 1. winding; bent in and out 2. *Bot.* having a wavy margin, like some leaves

Sioux (soo) *n.,* *pl.* Sioux (soo, soos) [< Fr., short for *Nadowessioux* < Ojibwa *Nadoweisiu* enemy, lit. little snake] a member of any of various American Indian peoples, esp. of the Dakota tribe *adj.* pertaining to this tribe.

sire (sīr) *n.* [< L. *senior, comp.* of *senex,* old] 1. a father or ancestor 2. title of respect used to address a sovereign or king 3. *Archaic* an important person, or one in a position of authority

sir-ee (se rē') *interj.,* often used with no or yes

si-ren (sī'ren) *n.* [< Gr. *Seiren*] 1. *Gr. & Roman Myth.* any one of a group of sea nymphs, represented as part bird and part woman, that used their singing to lure sailors to their destruction 2. a seductive woman 3. a whistle or similar device used as a warning signal

CHOOSE THE RIGHT DICTIONARY FOR THE TASK

DISCUSSION: Review how types differ and their specific uses.

Pocket dictionaries

Helpful in situations like work, filling out job applications etc.

Desk Dictionaries

More complete with many more entries and more complete information on each word.

Picture Dictionaries

For pictorial learning situations like identifying animals, skeletal system, and other subjects. Can be fun and informative for pre-readers. Very sophisticated versions of this type of dictionaries exist.

Collegiate Dictionaries

More entries with more complex explanations and word origins. Often includes more colloquial language.

Technical Dictionaries

Used to find special definitions that differ from usual usage of words. This class will focus on the use of these special dictionaries. There are different types of technical dictionaries for different sciences. They can be very expensive and cost prohibits providing these on site in classes. The copies of pages will give the participants a chance to practice with these specialized dictionaries. They could also be encouraged to explore the TRW environment to see if there are technical dictionaries in the plant.

OBJECTIVES

SESSION 3

- The Process and Types of Reading
- Active and Passive Reading
- Skimming and Scanning
- Technical Vocabulary Building System

COMMUNICATIONS ON THE JOB II
SESSION 3

INSTRUCTOR NOTE

IN SESSION 4, PARTICIPANTS WILL NEED TO USE TRW MANUALS IN CLASS. PLEASE STRONGLY ENCOURAGE THEM TO BRING ANY MANUALS THEY CAN FIND TO THEIR NEXT CLASS. THANKS!

INSTRUCTOR OUTLINE

THE READING PROCESS

HANDOUT

Have participants start the Module with the " Reading Fact Quiz"

Participants have blanks for notetaking!

ACTIVE READING

Reading with a purpose has been the focus of some of the activities in this course. Knowing the purpose of different reading activities helps move the reader into an **ACTIVE** reading mode.

The active reader is involved in a dialogue with the author. This reading involves asking questions of yourself as you read eg. what's going to happen next; I think so-and-so will do this when they find out; if x is true than how can this be? etc. **BRAINSTORM** other active reading questions.

PASSIVE READING

PASSIVE reading is in direct opposition to active reading. In passive reading the reader merely reads the words on the page. Reasons for reading like this abound. We have discussed concentration problems that may interfere. how about being forced to read something eg. school requirements. **BRAINSTORM** other reasons for passive reading.

COMMUNICATIONS ON THE JOB II
SESSION 3

FOUR AREAS OF READING

Vocabulary

Define

What does that popular radio sales pitch for a Vocabulary improvement system claim " the words you use say a lot about you"?

This may be a pitch to sell you something, but your vocabulary is important to your life and job. Just imagine if your vocabulary did not include the word VALVE or MICROMETER or TOLERANCE ? Perhaps these words mean different things since starting to work at TRW, different jobs, industries, cultures, and companies have different vocabularies. This course will encourage the participants to focus on their job-related vocabulary, but systems developed will most probably impact the participants everyday vocabulary. While many " vocabulary building systems" exist, this course will not present any one system. Participants will be encouraged to build their vocabulary within the lessons and individual systems that may emerge could be encouraged.

Vocabulary can be improved!

Comprehension

Define

Comprehension is part of the reading process. It is the act of understanding. Reading is a mental process and because it can not be seen it is difficult to describe. Therefore we try to describe the skills that make up reading. Comprehension is another one of the skills of "good reading " that can be improved. Participants will also work on their comprehension.

COMMUNICATIONS ON THE JOB II
SESSION 3

Speed

Define

The rates at which people read differ greatly. Do any native Clevelanders remember Dorothy Fuldheim? As a Broadcaster she interviewed many famous people and frequently talked about the fact that she often read several lengthy books in one day. There are probably other people who we have observed to be "speed readers." There are many programs people can use if they choose to increase their reading speed. Although speed will not be a focus in this course, it will be important for participants to learn about the different speeds of reading and when each one is most applicable.

Speed can be improved and modified to fit the purpose of our reading

INSTRUCTOR NOTE: Please review SPEED and CONPREHENSION System Notebooks with the class. Participants can work on these readings on their own. The readings can be removed and used at home. The COMM II participants can be encouraged to start at Level C which correlates closely to grade 6. They can work through the previous levels if they so desire.

Concentration

Define

Concentration is another component of the mental process of reading. Internal and external stimuli affect concentration. These were reviewed in session 1.

HANDOUT

ACTIVITY 1 - encouraging participants to review their reading strengths first and then their weaknesses.

COMMUNICATIONS ON THE JOB II
SESSION 3

ACTIVITY 1

READING SKILL INVENTORY

Consider the three areas of reading we have discussed:

COMPREHENSION SPEED CONCENTRATION

Which is the area in which you have the most strength?

The most important area of my reading that I feel needs improving is:

The area of my reading that I would most like to improve is:

This course will give participants an overview of strategies to improve these skills especially on the job. Many different courses exist to focus on improving your reading skills. Write down a goal for improving your reading in the near future.

COMMUNICATIONS ON THE JOB II

SESSION 3

READING SKILLS

For participants to improve their reading skills they it is helpful for them to:

- Acknowledge that your ability to read efficiently is important to their job and their company.

  Some people, who believe that they don't "read" on the job, just need help exploring other facets of reading that they may not acknowledge (e.g. skimming, scanning, Process Documents that they read a long time ago etc. May need to BRAINSTORM these).

- A positive attitude- Develop a positive attitude for learning how to read or improving their current abilities.

- Set personal goals for improving your reading as in the Activity.

COMMUNICATIONS ON THE JOB II
SESSION 3

Use **Appendix** as guidance for presenting the following sections.

DIFFERENT READING RATES

- **SLOW STUDY** for difficult communications, following instructions or mastering information.
- **NORMAL READING** for magazine and newspaper articles, business reports, memos and fiction.
- **SKIMMING** for grasping the main ideas and for some fiction.
- **SCANNING** for looking up phone numbers, stock quotations and information on charts and forms

COMMUNICATIONS ON THE JOB II
SESSION 3

STAGES OF READING

LEARNING TO READ

Stage 1	Focus on identifying and perceiving sounds, letters, and words.
Stage 2	Focus on perceiving groups of words and their meanings.

READING TO LEARN

Stage 3	Focus on extracting meaning from paragraphs and longer selections.

COMMUNICATIONS ON THE JOB II
SESSION 3

" GOOD " READING HABITS

- Concentration
  - * Controlling external stimuli
  - * Controlling internal stimuli
- Setting a Purpose
- Setting a Context
  - * Physical Context
  - * Mental Context

RAPID READING

1. Understand why it's important to read rapidly.
2. Recognize rapid reading as a selective process.
3. Understand when to use each of the two rapid reading methods.
4. Understand how to use each of the two rapid reading methods.

TWO METHODS OF RAPID READING

1. SKIMMING

2. SCANNING

COMMUNICATIONS ON THE JOB II
SESSION 3

SKIMMING AND SCANNING

SKIMMING

WHEN you are required to determine the main idea through attention to signals the writer uses. Use these techniques when skimming.

HOW

- Note titles and subtitles
- Read introduction and conclusion
- Read boldface type and italics
- Look at illustrations, charts, graphs and figures

COMMUNICATIONS ON THE JOB II
SESSION 3

SCANNING

WHEN you are required to locate specific detail mixed in with many other details. Use these techniques when scanning.

HOW

- Read down the page (rather than across)
- Using a reading aid, such as a bookmark, to help keep your place if you need it
- Read table of contents and index to locate **general** information areas
- Read section and column headings to locate **specific** information areas

TRY IT! **SCANNING DRILLS** Time the participants as they scan, or have them time themselves.

TIMES:
FAST = under 10 secs
MEDIUM = 10-20 secs
NEEDS PRACTICE = over 20 secs
Some readers with scanning difficulties may take over 1 minute to do these drills. Practice can help!

According to the chart below, what taxable investment is equivalent to a 5.50% tax-exempt bond, for the $16,000 to $20,000 bracket?

Equivalent taxable and tax-exempt yields, by income bracket

If your net taxable income (joint return) is...	$8,000 to $12,000	$12,000 to $16,000	$16,000 to $20,000	$20,000 to $24,000
a tax exempt bond paying...	**is equivalent to a taxable investment paying...**			
4.00%	5.27%	5.52%	5.78%	6.17%
4.25%	5.61%	5.86%	6.14%	6.56%
4.50%	5.94%	6.21%	6.50%	6.94%
4.75%	6.27%	6.55%	6.86%	7.33%
5.00%	6.60%	6.90%	7.23%	7.72%
5.25%	6.93%	7.24%	7.58%	8.10%
5.50%	7.26%	7.59%	7.95%	8.49%
5.75%	7.59%	7.93%	8.31%	8.87%
6.00%	7.92%	8.27%	8.67%	9.26%
6.25%	8.25%	8.62%	9.03%	9.64%
6.50%	8.57%	8.96%	9.39%	10.03%

Data: J. B. Hanauer & Co

Answer: seven and ninety-five one hundredths per cent

COMMUNICATIONS ON THE JOB II

SESSION 3

According to the index sample below, on what page of the book would you find a discussion of the uses of polyethylene?

Parity, law of, disproven, 47
Particle accelerators. *See* Atom-smashers
Particle theory of matter, 12, 125-126
Particles. *See* Atomic particles
Pascal, Blaise, 54, 56, 76
Pauli, Wolfgang, 125
Peking man, 12
Perey, Marguerite, 129
Perier, Florin, 54
Periodic table of elements, 36-38, 124, *127*
Petroleum, 73
Phenolics, 112
Philosopher's Stone, 15, 19, *21*, 26
Phlogiston theory, *cartoon* 31, 32-33
Phosphates, 140
Phosphorus, 26, 30, *140;* white, discovery of, *28*, 32
Photon, *154;* creation and decay of, *155*
Physics, modern specialties, 10, 41; education and careers, 41, 48
Pi mesons, *diagram* 154, 156. *See also* Pion
Pictet, Raoul, 59
Pile, nuclear, 173
Pion (pi-meson), 156, *157*
Pitchblende (uranium ore), *8*, 120, 141
Planck, Max, 124
Plasma particles, 176; controlled fusion of, as potential power source, 10-11, 177-178; fusion of, *diagram* 174, *176-177*, 177; generation of electricity, 179; in nature, 45, 176; possible confinement of, 11, 45, *diagram* 178, 179; record temperatures achieved, 11
Plasma state of matter, 10, 45, 176, 179
Plastics, 108, 175; production, *110-111*, 114, *115;* raw materials for, 112; uses of, *112-113, 116*
Platinum, 134, *135*, 143; uses of, 135
Plutonium, 126, *148;* high fissionability, *172-173*, 174
Pneumatic air hammer, *diagram* 54
Polarization, 74
Polonium, 140, *141;* discovery of, 120, 141; radioactivity, *diagram* 120, 141
Polonium 212, half life, 170
Polyesters, 112
Polyethylene: production, *115;* uses of, *113*
Polyfluorocarbons, 112
Polymerization, 108, *110-111*, 112
Polymers, 107-108, 111, 112
Polyolefins: raw materials for, 112; uses of, *112*
Polystyrenes: production of, *110-111;* raw materials for, 112
Polyurethanes: raw materials for, 112; uses of, *113*
Polyvinyl chloride: production of, *110-111;* uses of, *113*
Positron, 154-155, *diagram* 154; creation of, *155*
Potash, 129. *See also* Potassium
Potassium, 36, 128, *129;* radioactivity, 129
Potassium aluminum sulphate. *See* Alum
Powell, C. F., 156
Praseodymium, *147*
Prehistoric man, acquaintance with and use of matter, 12, 30, 134, 137; bronze, *10;* minerals, 12, 13; transformations of matter, 13
Pressure cooking, 80, *81*
Pretiosa Margarita Novella, 12
Priestley, Joseph, *cartoon* 31, 33, 56
Principia, Newton, 30, 75
Principles of Chemistry, Mendeleyev, 36
"Probability" waves, 158
Promethium, 37, 146; oxide, *146*
Protactinium, 148; oxide, *148*
Protium, *153*
Proton(s), 10, 12, 16, 151, *154;* bombardment of atoms with, 161-162, *163-164;* charge, 152; determine atomic numbers of elements, 38, 126; held by nuclear force, 155-156, *157*, 170
Pupin, Michael, 180

Answer: page one hundred thirteen

COMMUNICATIONS ON THE JOB II

SESSION 3

TRW SCANNING DRILLS FOR PRACTICE

PLEASE USE HERE IF TIME PERMITS. IF NOT, START NEXT SESSION WITH THESE AS A SCANNING REVIEW AND PRACTICE.

TIME FOR TOTAL EXERCISE APPROX 15 MIN WITH DISCUSSION

INSTRUCTOR NOTES

Here are 10 scanning drills for practice. All documents are official TRW documents. Have participants time themselves with available time pieces. They record or jot down (anywhere on their sheet) how long it took to find the answer not including the time to right it down. It is very effective to circle the answer on the document. This is fine. They can keep these drills or hand them back. They can be reused for other classes if they haven't been marked on.

Have participants retake the "quiz" and see if the information in this unit helped them change fallacies to a new understanding of the reading process.

FALLACIES ABOUT READING

BECOME

FACTS ABOUT READING

Discuss responses and where these fallacies come from. Did the information in this session help turn these fallacies into facts?

Reading is learned only at an early age?	T	F
All material should be read in the same way?	T	F
A person has to read every word to be "GOOD" reader?	T	F

COMMUNICATIONS ON THE JOB II
SESSION 3

JOB RELATED VOCABULARY IMPROVEMENT

Building job related vocabulary starts with words that you already know. Words and terms used on the job may look like words you use outside of work everyday.

That's important to remember. Start by thinking of the definition that you have used outside of the job. Then think of the way you have either read or seen the word at work. This will also give you a clue to it's job related meaning.

Use your new and tuned up dictionary skills. You probably have a "regular" dictionary on hand. Look the word up there. Review the definitions given. Separate the everyday uses from any that may be close to your job related use of this word. You need to be creative in finding the way the definitions fit. This dictionary may not reveal a definition that is job related. That will tell you that your word has a special technical meaning.

This dictionary may not reveal the job related definition of your word. You now need to find a new source for definitions. Let's take a look at some possibilities. Could you find a Technical Dictionary? Would a manual with a glossary help? What about asking a "seasoned" co-worker? Take a few moments to discuss these methods with the class. Rank them in the order that the class thinks would help find the most correct definition.

1. ______________________________
2. ______________________________
3. ______________________________

Discuss what is good and bad about each method:

____

____

____

COMMUNICATIONS ON THE JOB II

SESSION 3

OVERVIEW OF JOB VOCABULARY WORD SEARCH

Steps in review:

1. Think of "regular" use
2. Look up the "regular" definition
3. Find:
    a. job related dictionary
    b. manual with glossary
    c. co-worker with the definition

Have participants do Steps 1&2 in class. Send them out with Step 3 as homework assignment. They may tell you that these other items in Step 3 are impossible to find. Encourage them to be resourceful! They may be able to come up with something, at least Step 3c.

CLASS ACTIVITY

Do Steps 1 & 2 and write down definitions for the following words. Use the space below.

Plant

Step 1 ____

Step 2 ____

Valve 1 ____

2 ____

Jam 1 ____

2 ____

Mean 1 ____

2 ____

You will continue on to the next steps with your assignment! GOOD LUCK!!

APPENDIX

FACILITATOR MATERIAL ON GOOD READING HABITS ETC

OBJECTIVES

SESSION 4

- Homophones and Homographs
- Previewing
- Job-related Vocabulary Improvement

HOMOPHONES AND HOMOGRAPHS

HOMOPHONES

DEFINE: homophones are words that sound alike no matter how they are spelled.

Breaking down the word homophones helps define it.

Homo=same phones= individual speech sounds.

There are hundreds of homophones in the English language.

WHY LEARN ABOUT HOMOPHONES?

Knowing that they will appear can help a reader more sense of what they read.

Knowing the different pairs or multiple homophones of a word can also prevent using the wrong word in written communication.

The following list presents many common **homophones**. Learning their meanings and spellings can improve participants vocabularies.

COMMUNICATIONS ON THE JOB II
SESSION 4

EXAMPLES: To review the spelling and meanings of these homophones.

- **aloud**=with the voice
- **allowed**=permitted

- **board**=a flat piece of wood; a group of administrators
- **bored**=tired of a dull activity

- **billed**=charged
- **build**=construct

- **cite**=to summon to appear in court; to quote or refer to a passage
- **sight**=act of seeing
- **site**=place

- **close**=shut
- **clothes**=dress

- **complement**=something that completes
- **compliment**=expression of courtesy

- **descent**=downward motion; ancestry
- **dissent**=disagreement

- **lean**=to bend the body or rely on another
- **lien**=acclaim on property as security against payment of a debt

- **naval**=related to ships, the navy
- **navel**=depression in the middle of the stomach from the umbilical cord

- **pore**=opening
- **pour**=cause liquid to flow

IMPROVE YOUR READING: IMPROVE YOUR JOB by Jeanne M. Miller

COMMUNICATIONS ON THE JOB II
SESSION 4

- **pride**=self-esteem
- **pried**=showed inquisitiveness; moved with a lever

- **principal**=a main person or thing
- **principle**=basic truth or rule of conduct

- **soar**=rise high
- **sore**=painful, tender

- **stationary**=not moving
- **stationery**=writing materials

- **their**=belonging to or done by them
- **there**=place
- **they're**=contraction of they are

- **threw**=tossed
- **through**=in one side and out the other

NOTE: Don't confuse through with thorough, which means complete!

- **to**=in a direction toward
- **too**=also; more than enough
- **two**=the second number

- **vial**=bottle
- **vile**=wicked
- **viol**=musical (stringed) instrument

IMPROVE YOUR READING: IMPROVE YOUR JOB by Jeanne M. Miller

COMMUNICATIONS ON THE JOB II
SESSION 4

ACTIVITY 1

Practice with the above list of homophones. Have participants choose the words that best fill the blanks.

NOTE: If these words are at a challenging reading level, have participants do it in small groups or out loud together.

1. The new drapes will__________the conference room.
2. The future__________of the firm's headquarters is still undetermined.
3. The__________of racial equality will be fostered in this workplace at all times.
4. The lab technician will now__________the serum into the__________.
5. Worker__________over relocating was reducing the department's morale.
6. The sales assistants promptly ordered__________new________from Office Supply.
7. The bank was forced to put a__________on the company's new parking structure.
8. Each month I will__________examples of employee innovation in the company newsletter.
9. Produce prices will__________because of the Florida freeze.
10. He__________the department $300 for the copy paper.

1. complement
2. site
3. principle
4. pour, vial
5. dissent
6. their, stationary
7. lien
8. cite
9. soar
10. billed

IMPROVE YOUR READING: IMPROVE YOUR JOB by Jeanne M. Miller

COMMUNICATIONS ON THE JOB II
SESSION 4

HOMOGRAPHS

DEFINE:

Breaking down the word Homograph can help to explain it's meaning. Homo=same graphs= something written. Thus homographs are words that are written (or spelled) the same but sound different.

A tear you shed over a tear in your shirt is a good example.

There are basically three types of homographs.

1) Some homographs are not related at all in meanings:

bass= a type of fish
bass= the lowest singing voice or musical instrument.

- These tend to be Anglo-Saxon in origin and one syllable in length.

BRAINSTORM
OTHERS Especially work-related examples.

2) Others are distantly related by root words but have diverged in meaning:

desert= dry, barren land
desert= abandon

BRAINSTORM
OTHERS

3) The majority of homographs have the same basic meaning but are pronounced differently. The syllable stress may vary or the vowel sound may change. Their use as parts of speech may also vary.

read= to process written words
read= past tense of read

BRAINSTORM THOSE BELOW AND OTHERS Especially work-related examples.

permit= to grant permission (v)
permit= a written permission (n)

separate= to keep apart (v)
separate= detached; apart from (adj)

defect= a flaw (n)
defect= to leave without consent (v)

COMMUNICATIONS ON THE JOB II
SESSION 4

PREVIEWING Appendix A presents detailed reference on Previewing

Different reading skills have been discussed in this program. One technique that will help with recalling facts is previewing. It is easily learned and very helpful. It helps the reader become familiar with material before actually reading it. Technical reading can especially be tackled more easily with this method.

Previewing is like seeing beforehand.

Previewing before reading is like consulting a map before taking a long trip.

Previewing gives us:

- a fast impression
- a quick survey
- a concise overview

Why Preview?

- to identify topic and thoughts
- to see how the material is organized
- to make it easier to pick out details when we read
- to focus our thoughts so we can concentrate on the material better

COMMUNICATIONS ON THE JOB II
SESSION 4

HOW TO PREVIEW

* Articles

Read title
Read headings if there are any.
Read first several paragraphs.
Quickly read the first sentence of each of the remaining paragraphs
Read final few paragraphs.

ACTIVITY 6 **Handout SPC ARTICLE**

HOW TO PREVIEW

* Chapters

Read title
Read headings and sub headings
Look for and read:
    Objectives
    Introduction
    Summary

ACTIVITY 7 **INTERACTIVE COURSEWARE BOOKS**

HOW TO PREVIEW

* Manuals

Skim preface or introductory section
Look over Table of Contents

ACTIVITY 8 **TRW MANUAL**

COMMUNICATIONS ON THE JOB II
SESSION 4

VOCABULARY # 1

Shear

Gage

Burrs

Taper

Blend

Chrome

Forge

TRW COMMUNICATIONS ON THE JOB II

OBJECTIVES

SESSION 5

- Prefixes and Suffixes, Synonyms and Antonyms
- Identifying Main Ideas, Topics, and Details
- Job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB II
SESSION 5

WORD STRUCTURE

INSTRUCTOR OUTLINE

The dictionary work has helped participants recognize different words and their parts of speech. Let's now look at the structure of words.

Knowing how words are built, also helps vocabulary building. Participants can learn how to figure out new words by discovering how the structure of words gives clues to their meanings.

Word parts are: (participants have outline with the word parts in the order in which they build words).

prefixes

roots

suffixes

Define each:

ROOT - the main part of the word which provides the basic meaning of that word.

PREFIX - one or more letters added to the front of a word to make a new word. They usually change the meaning of the root word.

SUFFIX - a part that is added to the end of a root word. They usually don't change the meaning but do change the part of speech of the root word.

Prefixes and suffixes are never used alone.

COMMUNICATIONS ON THE JOB II
SESSION 5

ROOTS: Roots will be presented first since they are the first building block of words.

The parts of words that were just presented are important keys to discovering the meanings of words. The root is the only essential part of any word. If the other parts can be removed, they are most likely prefixes or suffixes. As was pointed out before, those word parts cannot stand alone. Because the English language is made up of root words from other languages, such as Greek and Latin, the root word that ends up standing alone may not actually make sense unless it's derivation is understood.

The easiest way to understand roots is to see them and review their meanings. The following roots and their meanings can provide participants with the keys to unlock the meanings of many words, even in more difficult and technical readings.

WORD PART	MEANING	EXAMPLE	YOUR EXAMPLE
audi	to hear	audio	
auto	self	automobile	
bio	life	biology	
cide	to kill	pesticide	
cred	to believe	credit	
dic	to speak; tell; say	dictate	
duc	lead; make; shape	reproduce	
cap	take or seize; hold	capacity	
(capt)		captive	
fac	do, make	facsimile	
fer	bear or carry	transfer	
graph	write	paragraph	
logos	speech or science	prologue	

COMMUNICATIONS ON THE JOB II
SESSION 5

(ology)	study of	microbiology	
luc	light; shine	translucent	
		luminous	
miss	send	dismiss	
(mit)		remit	
path	suffering; emotions	pathetic	
phobia	fear	zoophobia	
phono	sound	megaphone	
port	carry	portable	
scribe	write	scribble	
(script)		Scripture	
spec	look	spectator	
vers	turn	conversion	
vita	life	vitality	
(viv)		vivify	

COMMUNICATIONS ON THE JOB II
SESSION 5

PREFIXES

This section will explore only some of the most common prefixes.

BRAINSTORM well known prefixes. Hopefully this unit will define the ones that come up. The specific definitions to common prefixes may be assumed to be understood but difficult to define. Be sure that by the end that the prefixes that came up in this brainstorm session have been defined.

SINGLE MEANING PREFIXES

Some prefixes have only one meaning while others may have multiple meanings.

Prefixes that always mean **NOT**:

NON	nonacid	nonsense
	nondrinker	nonsmoker
	nonunion	nonfat
UN	uncoated	unprotected
	unapproved	unaccepted
	unfinished	unordered

In some dictionaries these words will not be defined because the meanings are simply a sum of the prefix and the root word.

PREFIXES IN THE DICTIONARY

Review how dictionaries cover prefixes. Most do not give definitions of every prefix word. Discuss methods for finding the words that do not have definitions given.

COMMUNICATIONS ON THE JOB II
SESSION 5

MULTIPLE MEANING PREFIXES

Prefixes that mean **NOT** but have more than one meaning:

DIS=NOT in these words:

distrust
dislike
dishonest
dissimilar

DIS=LACK OF/ OR OPPOSITE OF

disrespect
disregard
disfavor
disarray

BRAINSTORM : others, especially work related examples!

ACTIVITY 1: " DIS " ACTIVITY

Have participants:

Look at the list of words. Think about what each word means. Circle each word in which **DIS** means **LACK OF OR OPPOSITE OF**

1) discomfort	LO	6) disagree	
2) disallow		7) disassemble	OO
3) disadvantage	OO	8) disrobe	OO
4) disarm	OO	9) dismount	OO
5) disobey		10) disorder	LO

INSTRUCTOR KEY: LO = LACK OF   OO = OPPOSITE OF

Note: These may be confusing but if dictionary definitions are checked, the words indicated will have dis = not.

COMMUNICATIONS ON THE JOB II
SESSION 5

Other multiple meaning PREFIXES:

IN=not

inactive	indirect
incomplete	insane

IN=in or **into**

inlay	inscribe
inclose	insert

Note: Yes inclose is a word! Have participants look it up in dictionary if questioned.

IN=IM

when it comes before b, m, and p. It has the same two meanings as **IN.**

IM=NOT

impure	immortal

IM=IN or **INTO**

imbed	impress

MIS=WRONG or **WRONGLY/** or **BAD OR BADLY**

misspell= spell wrong
misrule= rule badly
misinform= give wrong information

RE=ANEW/AGAIN/BACK

reinvest	resale
rebore	rechrome

BRAINSTORM : others, especially work related examples!

COMMUNICATIONS ON THE JOB II
SESSION 5

MORE Prefixes **INTER=BETWEEN**
and their meanings:

interdepartmental
interscholastic

INTRA=WITHIN

intramural
intrastate

EX=OUT FROM, AWAY

excise exwife
export

HYPER=OVER OR ABOVE NORMAL

hyperactive
hypercritical

PRE=BEFORE

precooked
prefix !!!

REVIEW classes initial list to be sure all prefixes that came out of initial brainstorming session were covered.

COMMUNICATIONS ON THE JOB II
SESSION 5

SUFFIXES

Like prefixes, suffixes cannot stand alone. They usually change a root word's part of speech. The common suffixes are covered here. As before it may be helpful to **BRAINSTORM** as many as possible and then make sure these are covered.

These suffixes will be presented in groups with the root tense in common. This class did not cover parts of speech. It is helpful to present suffixes in the way they modify words by showing how the root word changes to a different part of speech.

SUFFIX	ADDED TO	MAKES	MEANS
-LESS	noun	adjective	without something helpless topless
-ISH	noun	adjective	somewhat like something foolish boyish
-FUL -OUS -Y	noun	adjective	full of helpful porous smokey
-LY	noun	adverb	like a something ghostly precisely
-ION -SION -TION -MENT	verb	nouns	state of being something employment revision

COMMUNICATIONS ON THE JOB II
SESSION 5

Participants do not have following--for instructor use. Cover if time allows or these examples surface.

SUFFIX	ADDED TO	MAKES	MEANS
-ABLE	verbs	adjectives	can, able
			marketable
-IBLE			flexible
-ER	verbs	nouns	one who
-OR			driver counselor
-IZE	adjectives	verbs	cause to be
-FY			something
-EN			
			unionize strengthen simplify

REVIEW Any additional work-related or brainstorm suffixes.

COMMUNICATIONS ON THE JOB II
SESSION 5

SYNONYMS A) define:

words that have the same, or almost the same, meaning.

B) What do synonyms do? They make our language more:

1) efficient

2) interesting

3) precise

BRAINSTORM some common ones, especially work-related.

Others:

modify=change
automobile=car
measure=gauge
valve=tap
plant=factory
work=labor

Reading is more efficient the more synonyms you know.

C) Sources for finding synonyms:

1) Dictionaries- many list synonyms at the end of the definition by giving a bold italicized **Syn**.

2) Thesaurus- a book with words grouped by ideas. In a dictionary you start with a word and look it up. In a thesaurus you start with an idea and find closest word or synonym to express it.

PRACTICE with thesaurus. Have participants write down job-related words. Have partners challenge each other to find the most synonyms for a word.

Crossword buffs are " pros " at synonyms! Explore!

COMMUNICATIONS ON THE JOB II
SESSION 5

ANTONYMS

Define: words that have opposite meanings.

BRAINSTORM common antonyms especially job related ones as in safety and dangerous.

EXAMPLES:

succeed - fail
help - hinder
specific-general
erratic - regular
usable- scrap
revenue- expenses

PRACTICE use dictionaries and partners as in synonym practice session.

COMMUNICATIONS ON THE JOB II
SESSION 5

STRUCTURE OF NON-FICTION/TECHNICAL READING

Participants have a fact or fantasy question to indicate understanding of non-fiction. Have them answer and review with definitions.

Define non-fiction and fiction. These are commonly confused terms. Technical reading can easily be categorized as non-fiction. Fiction, although it might be more fun, will not be our focus.

Structure Overview:

Topic

Main thought

Details

This first activity will start the participants in the process of identifying structure.

Activity 1 Group activity to identify topic. A general subject reading.

ACTIVITY 1

Each person read the following and then discuss the question with the group.

Nevertheless, saving is primarily done by an entirely different group: by individuals, by families, by households. An individual may wish to save for a great variety of reasons: to provide for his old age or for a future expenditure (a vacation or an automobile). Or he may feel insecure and wish to guard against a rainy day. Or he may wish to leave an estate to his children. Or he may be an eighty-year old miser who enjoys the act of accumulating wealth for its own sake. Or he may already have signed himself up to a savings program because an insurance salesman was persuasive. Or he may desire the power that greater wealth brings. Or thrift may simply be a habit, almost a conditioned reflex, whose origin he does not himself know.

What is the general topic of this reading selection?

Savings

A more specific topic might be:

Why people save. The different reasons people save.
Stating specific reasons would be giving details!

COMMUNICATIONS ON THE JOB II
SESSION 5

Topic - the subject or theme of a reading, discussion or conversation. Set by the author. It may be obvious and stated in the tile, or the reader may have to delve deeper into several paragraphs to discover the topic. Being as specific as possible when identifying the topic helps lead to finding the main thought more easily.

Questions to ask to determine the topic:

What is the author writing about?

Is the topic stated in the title?

Is it contained in a heading?

Can it be found in the first sentence of a paragraph or in the first paragraph of a longer more technical selection?

ACTIVITY 2 This activity will help participants determine the specific topic.

COMMUNICATIONS ON THE JOB II
SESSION 5

ACTIVITY 2

DIAL INDICATORS

The principle of direct reading form a pointer and a graduated dial delivers the accuracy and speed needed in out plant's inspection and manufacturing operations. The dial indicator is used on all types of special and standard gaging equipment. Some dial indicators are direct reading and others serve as comparators showing plus or minus variations in size.

A dial indicator by itself can do nothing. It must be mounted and set properly before it can be used in checking or measuring work.

The specific topic is:

How dial indicators are used

Main Thought - Generalizations about the topic

The main thought says what the author thinks about the topic. As writing becomes more complex it may become more difficult to pick out the main thought. The author may never explicitly reveal it.

Questions to ask:

What does the author think about the topic.

Is it the same as what I think?

Does the author's main thought cause me to consider changing my mind?

Where is the main thought found?

Is it explicitly stated

- in the first sentence or paragraph?

Is it implicitly stated? Define Implicit

- the reader must search for and add up details to pick up the main thought.

ACTIVITY 3 Two readings to practice finding the main thought.
ACTIVITY 4 One is a generic Intro to SPC, the other comes from Zircoa materials.

COMMUNICATIONS ON THE JOB II
SESSION 5

ACTIVITY 3

COMMON AND SPECIAL CAUSES

Dr. Walter Shewhart of The Bell Laboratories, while studying process data in the 1920's, first made the distinction between controlled and uncontrolled variation, due to what we call common and special causes. He developed a simple but powerful tool to dynamically separate the two - The Control Chart. Since that time, Control Charts have been used successfully in a wide variety of process control situations, both in the U.S. and other countries - notably Japan.

Several types of control charts have been developed to analyze both variables and attributes. However, all control charts have the same two primary functions and are prepared and analyzed according to the same basic outline. The two functions are:

- To signal the presence of special causes of variation so that corrective action can be taken to bring the process into a state of statistical control.
- To give evidence whether a process has been operating in a state of statistical control so that a meaningful assessment of its capability to meet engineering specifications can be made.

The specific topic is: Use of Control charts

The main thought is: Why control charts are used

COMMUNICATIONS ON THE JOB II
SESSION 5

Activity 4

The main responsibility of a floor inspector is to perform quality audits and to keep records. The inspector's duties vary greatly in certain areas. Valve lines and automation are generally about the same. Duties in rotocaps, caps, heat treat, forge shop and weld lab vary greatly due to either product line or procedures exclusive to that area.

All floor inspectors must have a very good knowledge of customer quality acceptance standards, customer visual defect acceptance standards, use and set up of all types of gages and use of Rockwell hardness testers. Certain areas require the use of visual pyrometers, link testers, Eimacs, Brinell scopes, optical comparators, micrometers, calipers and microscopes. A floor inspector must have a good working knowledge of blueprints, routings, gage layouts and heat treat abstract procedure.

A floor inspector is required to make decisions on the acceptability of parts slightly out-of-print or with visual defects. He must be familiar with the acceptable variation that a given customer will accept and, if questionable, to consult with his supervisor on disposition.

A floor inspector is responsible for disposal of any scrap parts on his lines. He utilizes locked scrap tubs for each VMS of steel and must keep records of the number of scrap parts for each FR. He must also determine the department or operation causing the scrap and using a code for location and defect, enter it into the computer.

The floor inspector thus ensures that parts leaving his lines will meet acceptable quality standards, both visually and dimensionally. He also keeps records of audits performed and ensures that parts not meeting these standards are either repaired or sorted and unacceptable parts scrapped.

The specific topic is:

The responsibilities of floor inspectors.

The main thought is:

The floor inspector is an important part of quality parts

COMMUNICATIONS ON THE JOB II
SESSION 5

Details Support the main thought
Explain the main thought
Describe the main thought

Question to ask: What does the author use to develop and support his/her main idea?

What details do:

* support	* explain
* validate	* clarify
* prove	* describe

Details answer the questions:

* Who

* What

* Where

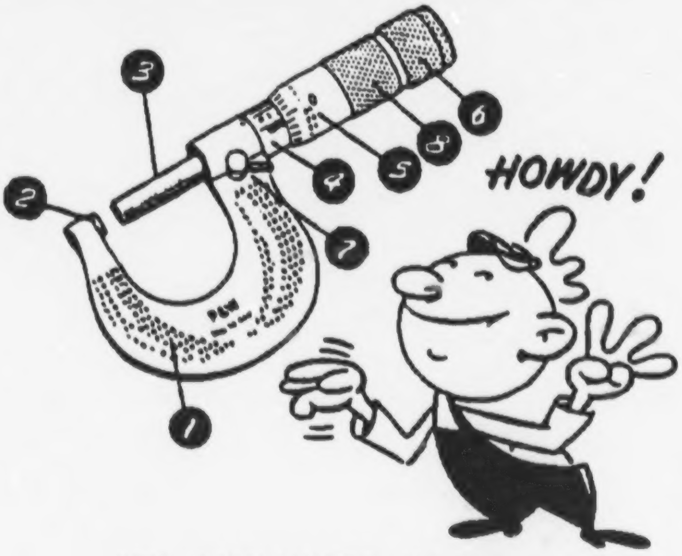
* How

BRAINSTORM any others? When? How much?

ACTIVITY 5 Somewhat different. Asks participants to write down specific details after reading.

COMMUNICATIONS ON THE JOB II
SESSION 5

ACTIVITY 5



GET ACQUAINTED WITH IT!

So that you can meet the most essential parts of a "Mike" and know them by their right names, as we refer to them later, we've numbered the different parts as illustrated above.

The FRAME (1) is the foundation on which the micrometer is built. The ANVIL (2) is set in the Frame and is one of the contact faces for taking measurements. The end of the SPINDLE (3) is the other measuring face. The SPINDLE (3) is threaded in the HUB (4) permitting it to be turned to or from the part being measured. The THIMBLE (5) is fastened on the SPINDLE (3) and securely held by the RATCHET CAP (6). The RATCHET CAP (6) permits a uniform pressure in taking readings. The CAM LOCK (7) holds SPINDLE (3) at any desired measuring position.

Please answer the questions on the next page.

COMMUNICATIONS ON THE JOB II
SESSION 5

The specific topic is:

Parts of the Micrometer

The main thought is:

Importance of knowing the names of parts of mike

The specific details are:

1. Frame
2. Spindle Measuring Face
3. Spindle Threaded End
4. Hub
5. Thimble
6. Rachet Cap
7. Cam Lock, etc.?

COMMUNICATIONS ON THE JOB II
SESSION 5

VOCABULARY # 2

Profile

Barrel

Rotary

Plating

Dresser

Exhaust

Clutch

OBJECTIVES

SESSION 6

- Following Instructions, Drawing Logical Conclusions
- Reading and Writing: Memos, Processes and Procedures
- Job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB II
SESSION 6

FOLLOWING INSTRUCTIONS

How many times have we heard or used the old adage " when all else fails read the directions!" ? These words are important. Yet how often, especially at work, do we follow this advice? Not relying on directions or instructions for tasks that are routine may be the quickest way of doing something. Using these old habits may prove dangerous when a new process, procedure or machine sits in front of you.

Encourage participants to discuss this adage. Do they live their lives by it or totally ignore the instructions? These differences can be based on an individual's preferred learning styles, their upbringing, their mentors, trainers, company values and/or company environment.

WHY FOLLOW INSTRUCTIONS?

BRAINSTORM THESE RESPONSES AND ANY OTHERS !!

Safety for self injuries etc.

Safety for others next person to get or use equipment or product

Safety for equipment responsible for costly breakdowns or repairs

Safety of the process costly defects/rejects next customer in process (internal or external)

TECHNICAL INSTRUCTIONS

It is common knowledge that many technical manuals and instructions are poorly written and difficult to follow. This leads to their lack of use. Many companies try to rewrite procedures and instructions to make them easier to use and increase the usage of these written materials.

Standard Operating Procedures will be explored in a later session.

STEPS TO SIMPLIFY INSTRUCTIONS

Instructions may be written in an orderly easy to read format. These usually include numbers, a logical sequence and easy to understand language.

Example:

1. Complete all information on form.
2. Sign and date form.
3. Mail form to this address ______, in envelope provided.

The form may end up being impossible but the directions are clear.

In most cases the order in which the steps are preformed is very important. What if step 3 above was performed before steps 1 or 2 ? Often a routine task (esp. at work) becomes so automatic that the steps are hard to explain. When you think of the steps of a procedure, explain and order the steps as if you were guiding a person who had never done the task. Keep their safety in mind! The next set of instructions need to be placed in the proper order. Give it a try.

ACTIVITY 1

Have Participants place number order in blank space. Discuss: Same order? What if 2 comes after 4 and so on. Are there more steps? Is this specific enough? Do we realize that there are so many steps in such a simple procedure until we try to explain it- or TEACH IT ?

TO CHANGE A LIGHT BULB TO A HIGHER WATTAGE:

1. Obtain higher watt bulb.
2. If old bulb is still lit, turn it off and let it cool. Don't touch hot bulb!
3. Leave power to socket off.
4. Gently hold bulb and unscrew in counter clockwise motion.
5. Place old bulb in a safe place
6. Take higher wattage bulb and place into the socket.
7. Hold bulb gently and screw clockwise into the socket until tight.
8. Turn on power to socket.

COMMUNICATIONS ON THE JOB II
SESSION 6

ACTIVITY 1

Place these instructions in the proper order. Fill in the correct number of each step in the blank.

TO CHANGE A LIGHT BULB TO A HIGHER WATTAGE:

6 Take higher wattage bulb and place into the socket.

8 Turn on power to socket.

4 Gently hold bulb and unscrew in counter clockwise motion.

1 Obtain higher watt bulb.

5 Place old bulb in a safe place

3 Leave power to socket off.

7 Hold bulb gently and screw clockwise into the socket until tight.

2 If old bulb is still lit, turn it off and let it cool. Don't touch hot bulb!

STEPS TO SIMPLIFY INSTRUCTIONS (CONT'D)

So far we have looked at instructions that have easy to identify steps. Instructions also come written in paragraph form. These can look very confusing and overwhelming at first. Any set of instructions can be reworked to make them easier to follow. You may already have a method that comes in handy. It may almost be an automatic thinking process.

Here is a method that separates instructions into manageable parts. This method combines the memory systems of association and classification that were presented earlier in this course. It also presents the word **PRAISE** as a mnemonic or memory assisting device. The word PRAISE helps you remember the steps in order. It also reminds you to give yourself credit or **PRAISE** after you successfully use this method.

1) P ositive, confident attitude toward being able to accomplish this new or different task or set of instructions. Give yourself credit for past accomplishments.

2) R ead all of the instructions before beginning any of them. This gives you the whole picture before bolting headlong into one step.

3) A sk yourself and be able to answer

   What do I need to accomplish? What am I being asked to do here?
   What is the desired result or finished product?
   Why is it important?

4) I dentify words that are new, technical or unfamiliar. Use your new and improved dictionary skills.

5) S pecial equipment needed? Gather any:
   - equipment (calculator, gloves, cart)
   - materials (procedure manuals, blueprints, batch ticket)
   - information (specifications, computer printouts)

   needed to perform the task.

6) E asy action words singled out that are used in the instructions. Give them special attention. These will be red flag words signaling **ACTIONS** to take!

Example: **load** the cart.; **insert** the cutting tool; **record** the weight.

COMMUNICATIONS ON THE JOB II
SESSION 6

STEPS TO SIMPLIFY INSTRUCTIONS (CONT'D)

After completing the six **PRAISE** steps remember to:

- Complete each step of the instructions in the correct order.

If you will use these instructions often:

- Create your own set of instructions to help you remember the steps.

If the instructions are in paragraph form use:

- **PRAISE** Step 6 - **Easy Action Words** to help break it up into individual steps. Make one step to a line with it's own verb.

ACTIVITY 2 Try it!

Care of Rules

The steel rule is a precision tool and should be kept in the best condition. This can be accomplished by keeping the rule clean. Whenever the rule is used near or around water or with sweaty hands, the rule should be wiped dry and oiled to prevent rusting. Some of the common abuses which should be avoided are the using of the rule for a screw driver, a scraper, or a pinch bar to pry one part free from another.

Remember! A steel rule is a precision-made measuring tool - use it as such.

1. Keep clean

2. If wet
 dry
 oil

3. Don't abuse
 no driver
 no scraper
 no pry bar

CONTEXT

Define and help participants explore the context of reading materials. Many times, while reading, an unfamiliar word crops up. How many times is it possible to figure out it's meaning by gathering clues from the "context". For example: while reading a novel, newspaper, or magazine article a word you've never seen appears. Do you stop to look it up as was suggested in the Dictionary Module ? To quickly go on reading, the reader often defines the word by figuring out it's meaning from the words and thoughts around it. Thus the context of the sentence helps determine the meaning of strange or unknown words or ideas.

USING CONTEXT AND DRAWING LOGICAL CONCLUSIONS

(Participants have blanks)

To draw logical conclusions requires " **active reading** " in which a dialogue takes place with the author. The reader is answering questions while reading based on:

1) knowledge
2) experience
3) sound reasoning

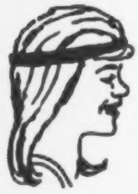
These three skills added together = decision making which is the crucial basis for technical reading.

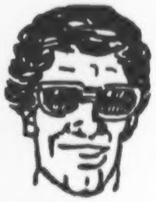
ACTIVITY 3 Context clues

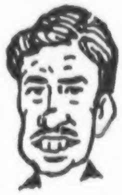
Participants must be "detectives" and use context clues to identify the "suspects".

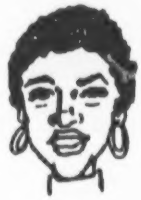
ACTIVITY 3

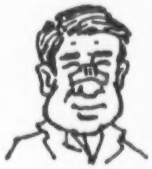
To be a successful technical reader, you must be a "detective" and find clues in your reading. Many descriptions and instructions are sketchy and hard to understand. In this activity match the descriptions to the suspects. Fill in the correct letter for each match.


A


B

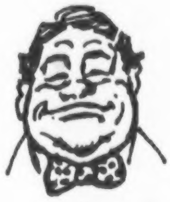

C

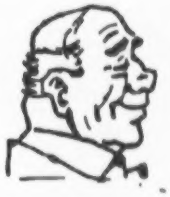

D

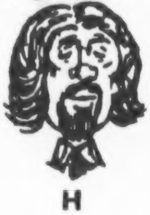

E

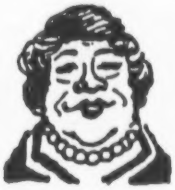
This suspect:

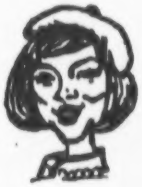
SAMPLE: __G__ 1. has a thinning hay loft.
______ 2. remembers to dot the ties.
______ 3. is a real pearl.
______ 4. never uses a razor.
______ 5. wears shades and a dimple.
______ 6. wears hoops instead of shooting them.
______ 7. loves petite caps.
______ 8. has a cut about the rest.
______ 9. better see the orthodontist.
______ 10. is in a band.


F


G


H


I


J

Did you have trouble matching these descriptions to the suspects? To be successful, you had to carefully read the brief descriptions; then search for clues to link them to the illustrations. When reading technical information, even if it is poorly written, you must find clues which improve communication between the writer and the audience.

From: READING AND UNDERSTANDING TECHNICAL INFORMATION by Richard Marsh

COMMUNICATIONS ON THE JOB II
SESSION 6

ACTIVITY 4

Directions: Use the chart describing the types of fire extinguishers used at Presto Valve to answer the questions on the next page.

Types of Fire Extinguishers

Description	Contains	Used On
Chrome cylinders with "A"	"A" 2 1/2 pressurized water	Class A fires. Paper, wood.
Short red cylinder with black coneshaped fiber nozzle. Labeled "BC"	"BC" 5 lb. CO_2 (carbon dioxide)	Class B and C fires. Oil and electrical. Can be used on Class A fires w/ limited effectiveness.
Red cylinder short hose and nozzle. Labeled "ABC"	"ABC" 6 or 10 lb. of dry chemical	Class A, B, and & C fires. Paper, wood, oil and electrical.
Red cylinder, short	"ABC" 5 to 10 lb. halon	Computer rooms

ACTIVITY 4 (continued)

1. You see a fire in a pile of oily rags. The nearest fire extinguishers are a silver-colored one with a hose and a red one with a hose and nozzle. Which should you use?

   Red cylinder with black nozzle

2. Smoke is coming out of your computer. Which fire extinguisher should you use?

   Red cylinder, short -- Halon

3. A pile of paper scrap is on fire. The two nearest fire extinguishers are a red one with a black nozzle and a red one with a short hose. Which one should you use?

   Red cylinder, short hose and nozzle labeled "ABC"

4. You see a fire in a corner, but aren't sure what is burning. Which would be the best fire extinguisher to use?

   Red cylinder, short hose and nozzle labeled "ABC"

MEMOS AND STANDARD OPERATING PROCEDURES

Overview

As organizations get larger and more complex, and economic hardships forces more companies to operate on a skeletal staff, written communications become more frequent and more important. A worker may need to tell the supervisor about a problem and needs to put the information in writing. A day shift worker may need to give some information to the next shift. Writing a good memo at an appropriate time makes an employee look alert and responsible. Every worker should know how to write a good memo and be comfortable using this form of communication.

Memos were included in the plan for this session. UTC's overview of TRW materials revealed that production employees may not use memos everyday . Perhaps this type of communication is posted on boards or in central locations. Please review the use of memos with the participants and encourage them to see that even if they don't currently use memos they could (and may) become important in their future work.

WHY READ MEMOS?

Reading and understanding memos helps you:

- Know what's going on around you
- Comply with company rules
- Do your job correctly
- Prevent accidents
- Respond quickly and confidently to changes in directions, work processes, equipment, materials
- Keep your job

IMPROVE YOUR READING: IMPROVE YOUR JOB by Jeanne M. Miller

COMMUNICATIONS ON THE JOB II
SESSION 6

Written Communication on the Job

How many times have you heard someone at work say, "Could you write all that down?" or "Put that in writing for me, and I'll get it taken care of" ?

Writing is one way to make sure that plans get carried out right, that everyone understands a policy, that people follow safety rules, or that people know what their jobs are. In this session, you'll practice several kinds of writing that many people use on the job.

MEMOS

Define: ____________________

____

Why are memos important: ____________________

____

How does TRW use memos? ____________________

____

Are memos important in your job? ____________________

____

Memo Form

Memos are a simple form of writing that many people use on the job. You may not be required to use them yourself, but chances are that they pop up for you to read. If you were more confident in writing them well yourself, you may find a new way to get your good ideas across to others and be listened to.

A memo has some standard features that let the reader know important information about the memo.

Guidelines for Writing a Memo

1. Follow memo format, using theses headings above the message:

   TO:
   From:
   Subject:
   Date:

2. Use your full name followed by your initials.
3. Use the full name of the person or specify the group of people the memo is directed to.
4. Make the specific subject of the memo clear in the heading.
5. Organize your thoughts carefully before writing your memo. Be sure to include only relevant information. Be sure you give your reader everything he or she needs to know.
6. State the purpose of your memo in the first sentence.
7. After you write your memo, check it carefully to be sure it is clear, organized and complete. Rewrite it if necessary.

Model Memo

MEMO

To: Don Parker
From: Mercedes Hunter
Subject: Lateness of February Bank Reconciliation
Date: March 14, 1986

This memo should explain why I am behind schedule in completing the February bank reconciliation.

The February statement form the first Mercantile Bank does not reconcile with our books. Apparently several errors were made when our deposits were recorded in our books. As a result, the bank statement shows a balance that is $3,532.31 less than the amount shown on our books.

I understand that the bank reconciliation is to be completed by the fifteenth of each month under normal circumstances. However, I will not be able to finish it until the errors have been corrected and the books for February brought up to date. I am certain that the reconciliation will be finished by March 20. Please see me if you have any questions.

COMMUNICATIONS ON THE JOB II
SESSION 6

ACTIVITY: WRITING A MEMO FROM NOTES USE GUIDELINES AND MODEL MEMO

This would be an ideal opportunity for the participants to put an idea or suggestion on paper to submit to the Synchronous Steering Committee. This may be something they have been putting off due to a lack of time or just not having the confidence to put their idea in writing. Perhaps it could become a class goal to see how many suggestions for submission can come out of their class. Thus the instructor's feedback would focus on the format of the writing, not a critique of the idea/suggestion.

If a participant absolutely can not come up with an idea, they should be required to write a memo based on the notes below.

USE YOUR OWN IDEA/SUGGESTION NOTES

SAMPLE NOTES:
Lee has some concern that the heating and cooling in the plant area is not always up to par. Lee has several ideas to help the situation. These are the notes that Lee wants to put into put these ideas in writing. Use Lee's notes to write a memo to submit to the Synchronous Steering Committee.

Heating problems Memo
3-30-93 to Synchronous Steering Committee
My Boss? anyone else? Keep a copy myself

problem

heat levels not consistent
hot and cold patches
takes days for the plant temp to catch up to outside conditions
hot outside-heat inside still on
cold outside- cool ventilation still on

solution/idea

review ventilation diagrams by TRW (Maint?)
check air flow with these new Flowmeter machines
new ducts off main duct in identified areas

MY NEW IDEA

use heat from forging area as I have shown on the sketch
include sketch

Trade Winds In Work Based Education, published by Partners In Education and Training, Baltimore, Maryland

COMMUNICATIONS ON THE JOB II
SESSION 6

SOP AND PROCESS SECTION NOTES:

Process and procedures are more common on the job. Often times these documents are used as workers learn the job and then are filed away and referred to less frequently. Review the participants use of SOP=Standard Operating Procedures. How do they use them; when are they used; and most importantly; are TRW SOP's written so that they are easily used? **BRAINSTORM** with the participants and use the TRW examples given. Perhaps they could break into groups/teams/pairs and review an example. They could use the **MEMO system** , as well as other new and improved skills from "COMM II", to revamp and improve these documents.

NOTE: Appendix includes background information on SOPs

SOP's AND PROCEDURES

Define:

1. procedure - a set of established forms or methods for conducting the affairs of a business.
2. Standard Operating Procedures = SOP

- Standard Procedures Process Control = SPPC are basically synonyms for writing specific procedures for a process.

ACTIVITY Analyze TRW SOP s

VOCABULARY # 3

Statistical ______________________________

____

Collet ______________________________

____

Ultrasonic ______________________________

____

CNC ______________________________

____

Induction ______________________________

____

segregator ______________________________

____

Chamfer ______________________________

____

Tolerance ______________________________

____

SOP FOR ACMES

1. Stop the machines whenever defects occur...don't continue to make bad parts or defects.
2. Make sure center drill is sharp...if not change it.
3. Make sure face tool is sharp... if not sharpen or replace.
4. Take air hose and blow excess oil and grit out of center hole.
5. Check valve under 3 power magnifying glass to determine if valve is good or bad.
6. Record and track total number of parts run and total number of defects by FR by shift.
7. Repair any center hole defects on drill press.
8. Check OD R/O at least 2 times per shift and make needed changes...Don't add cost to valve.
9. This means if the center is too large or deep then scrap the valve. If not sure - check with supervisor.

STANDARD OPERATING PROCEDURE

DEPT 408-4

CORRECTIVE ACTION FOR WAUKESHA ENGINE AND GENERAL ELECTRIC.

SEGREGATION OF PARTS WITH OUT OF PRINT SEAT RUNOUT

PURPOSE: TO ELIMINATE THE POSSIBILITY OF PARTS WITH OUT OF PRINT SEAT RUNOUT FROM BEING PASSED ON TO VISUAL INSPECTION.

S.O.P.

SEAT OPERATORS TO CHECK SEAT RUNOUT 100% DURING OPERATION. PARTS ARE NOT TO EXCEED .0002 BELOW HIGH LIMIT ON BLUE PRINT UNLESS INSTRUCTED BY SUPERVISOR.

ANY PARTS EXCEEDING THIS TOLERANCE ARE TO BE GIVEN TO REPAIRMAN.

ALL PARTS RETURNED FROM REPAIR ARE TO BE GAGED TO VERIFY THAT SEAT RUNOUT IS NOW IN TOLERANCE.

AFTER VERIFICATION THE SEAT OPERATOR WILL SEND REPAIRED PARTS ON TO THE NEXT OPERATION.

AUGUST 8, 1991
TONY LEONARDI

S.O.P.

C.N.C. SET UP

1. REMOVE ALL VALVES AND SCRAP FROM PREVIOUS F.R.
2. GET SET UP CARD FROM SUPERVISOR
3. GET TAPES AND PRINTS FROM CRIB
4. GET PROPER GAGES SET
5. GET NECESSARY TOOLING AND MAKE CHANGES
6. RUN PROGRAM TAPE INTO COMPUTER
7. QUALIFY TOOL HOLDERS AS NEEDED
8. RUN VALVE AND GET READING FROM CRIB
9. MAKE NEEDED ADJUSTMENTS
10. TAKE ACID TEST ON STELLITE VALVES ONLY AND ADJUST
11. GET FINAL READING FROM CRIB
12. GET SUPERVISOR APPROVAL

** NOTE ** CHECK RUN OUT AT LEAST 4 TIMES DAILY
CHECK STELLITE LINE 2 TIMES DAILY

S.O.P.

ALL VALVES

IN TRAYS

SHOULD BE MARKED
(MAGIC MARKER)

ON THE STEM

PRIOR TO

FINISH GRINDING

CORRECTIVE ACTION FOR WAUKESHA ENGINE

QA678.679 11/1/91

CHARLIE

S.O.P.

CINCI STEM GRINDERS
ROUGH, SEMI. FINISH.

1. CLEAR OUT ANY F.R.'S BEFORE BEGINNING SET UP
2. DISCARD ANY SCRAP VALVES PROPERLY
3. OBTAIN SET UP CARD FROM SUPERVISOR
4. OBTAIN SKETCH FROM CRIB AND HAVE GAUGES SET IN GAUGE CRIB
5. DRESS TRACTOR WHEEL AND GRINDING WHEEL, THEN CHANGE BLADES
6. SET TRACTOR WHEEL TO BLADE, LEAVING 1/8" CLEARANCE BETWEEN TRACTOR WHEEL AND BLADE.
7. SET TRACTOR WHEEL SLIDE TO GRINDING WHEEL BY PUTTING A VALVE ON THE BLADE AND MOVING TRACTER WHEEL SLIDE.
8. SET KICKER ROD FOR PROPER GRIND LENGTH AND BLEND
9. GRIND VALVE
10. MAKE NECESSARY CHANGES
11. GET SUPERVISOR APPROVAL
12. CHECK STEM RUN OUT AT LEAST THREE (3) TIMES AN HOUR
13. (FINISH GRIND ONLY) CHECK STEM MICRO ON PROFILOMETER AFTER EVERY DRESS.
14. CHART FIVE (5) PARTS AN HOUR ON SPC CHARTS

S.O.P.

30/A LANDIS

1. REMOVE ALL PREVIOUS VALVES FROM AROUND MACHINE, DISCARD ALL SCRAP VALVES.
2. OBTAIN SET UP CARD FROM SUPERVISOR
3. OBTAIN PRINT AND MASTER VALVE FROM CRIBS.
4. SET UP NECESSARY GAUGES.
5. REMOVE COLLETS AND REPLACE WITH PROPER SIZE COLLET.
6. MOVE WORK HEAD TABLE TO PROPER ANGLE.
7. REPLACE OR ADJUST TIP STOP TO PROPER LENGTH.
8. REMOVE SEAT RUNOUT.
9. GRIND VALVE AND FIND SIZE.
10. CHECK PART ON ALL GAUGES AND MAKE NECESSARY ADJUSTMENTS.
11. USING PROPER BLUEING CONE, BLUE UP A PART (IF IT DOES NOT BLUE UP, MOVE SEAT ANGLE UNTIL PART BLUES UP.
12. GET READING FROM GAUGE CRIB.
13. OBTAIN SUPERVISOR APPROVAL.
14. CHECK ALL PARTS 100% ON ALL GAUGES.
15. CHECK SEAT MICRO TWO (2) TIMES AN HOUR.
16. RECORD ON SPC CHARTS ALL PERTINENT INFORMATION, (FIVE (5) PARTS AN HOUR.

12-1/2 LANDIS - STANDARD SETUP PROCEDURE

1. Clean machine of previous F.R.
2. Obtain setup card from supervisor.
3. Remove blade.
    - A. Unlock regulating wheel handwheel locking screw.
    - B. Retract regulating wheel by turning handwheel counter clockwise to assure proper working space for blade removal.
    - C. Loosen kicker rod and retract rod for blade clearance.
    - D. Loosen screws and remove blade & shims - obtain proper gage.
4. Exchange blueprint and blade for F.R. being S.U. - get gage set.
5. Dress regulating wheel.
    - A. Turn switch to dress to attain regulating wheel high speed.
    - B. Lower dresser slide on to cam.
    - C. Infeed dresser .001 or .002, turn outer traverse control valve clockwise (out) and counter-clockwise (for in). Inner traverse knob is for dresser traverse speed - repeat until wheel is completely clean.
    - D. Turn switch to grind to obtain running speed.
6. Blade setting.
    - A. Turn machine off.
    - B. Clean holder and work rest.
    - C. Insert blade in holder and tighten.
    - D. Check with scale to make sure blade is of equal height at both ends.
    - E. Standard height is 4.
    - F. Insert blade 1/8 inside of grinding wheel - break edge if needed.
    - G. Hold blade down when tightening in work rest.
7. Setting blade to grind wheel.
    - A. Bring grinding wheel to within .020 of blade.
    - B. Use .020 shim to insure clearance of blade to grinding wheel.
    - C. Lock grinding wheel handwheel.
8. Adjusting regulating wheel to touch point of valve.
    - A. Jog regulating wheel - where high side is next to blade.
    - B. Loosen and drop V-block.
    - C. Turn regulating wheel handwheel clockwise to allow valve to rest freely on blade.
    - D. Infeed regulating wheel to touch point and lock.
9. Set kicker rod and valve location.
    - A. Drop valve manually - set kicker to proper grind length - can be adj. later.
    - B. Reset V-block to within .020 of head O.D. without touching O.D.
    - C. To infeed head locator - lock locator valvair. Adjust locator button to place valve in contact with kicker rod - do not over adjsut (or force) valve into kicker.
    - D. Unlock valvair to retract locator - eject valve.
10. Find size.
    - A. Check and adjust coolant.
    - B. Check diamond - replace if needed. Reset and dress grinding wheel.

12/19/83

C. Grind valve to .001 oversize.

D. Check size - taper - blend - R.O. - flat spots & chatter.

E. Use micrometer to obtain final size.

F. Obtain O.K. from supervisor and inspector.

TROUBLE SHOOTING 12-1/2 LANDIS

1- STEM RUNOUTS

A- Check blade height - wear & for loose blade
B- Check regulating wheel speed
C- Dress regulating wheel
D- Check for play in regulating wheel bearings
E- Check bad forging & insufficient stock
F- Check coolant spout on valve and on dresser

2- BURNT STEMS

A- Check diamond & speed & infeed
B- Check diamond gear box & cable
C- Check coolant spout alignment.
D- Dress regulating wheel
E- Check regulating wheel speed
F- Check bad forging & insufficient stock

3- STEM CHATTER

A- Check height & for loose blade
B- Check number of pieces on dress
C- Dress regulating wheel
D- Loose regulating wheel
E- Check locator for proper location of valve
F- Check for proper drag
G- Check V-block clearance
H- Check for play in regulating wheel bearing
I- Check regulating wheel alignment to grinding wheel
J- Check regulating wheel directional drive motor - if brushes are bad, motor speed will change - check with supervisor

4- STEM SIZE VARIATION

A- Check blade height & wear and for loose blade
B- Check diamond and infeed - also for play in post
C- Check hydraulic oil level
D- Check wheel guard clearance
E- Check for proper amount of coolant
F- Check for proper drag
G- Check for play in regulating wheel bearings
H- Loose regulating or grinding wheel
I- Check regulating wheel speed
J- Check locator for proper location of valve

5- WHEEL OR BLADE MARKS

A- Check proper coolant spout alignment
B- Check kicker rod and assembly
C- Check blade wear
D- Check diamond
E- Dress regulating wheel
F- Check V-block clearance
G- Check valve on ready finger for proper release
H- Check stem guide

6- GRIND LENGTH VARIATION

A- Check locator
B- Check for broken or worn blade
C- Check alignment of regulating wheel pocket with kicker cam
D- Check for broken kicker rod and kicker assembly
E- Check coolant for proper setting
F- Check for heavy shoulders from forging.

S.O.P.

SEGREGATION OF REJECTED PARTS

408-4

PURPOSE :

TO ELIMINATE THE POSSIBILITY OF DEFECTIVE PARTS GETTING PAST VISUAL INSPECTION

REASON :

CORRECTIVE ACTION FOR WAUKESHA ENGINE

S.O.P. :

ALL VALVES SET ASIDE AT VISUAL MUST BE CLEARLY MARKED WITH RED MARKING PENCIL. ONCE THE PARTS ARE REPAIRED, THEY ARE TO BE PLACED IN 10 SLOT BOXES FOR VISUAL PERSONNEL TO REVIEW.

ONCE THE

REPAIRED PART IS RE-INSPECTED FOR ALL DEFECTS

AND IS ACCEPTABLE, VISUAL PERSONNEL WILL REMOVE THE RED MARKING AND PLACE THE PART IN TRAY FOR SHIPPING.

TRW VALVE DIVISION

QUALITY CONTROL ORDER

TPFC-1003 REV. 3 PRINTED IN U.S.A.

QCO -	406
DATE:	3/31/92
PAGE NO.	1 of 5

SUPERSEDES:	QCO NO. 406	PAGE NO. A11	DATED 2/8/90	PART NAME Valves

PROCEDURE FOR HANDLING AND CONTROLLING DISCREPANT MATERIAL

1.0 PURPOSE:

To establish a uniform and well understood procedure for identifying, controlling, segregating and dispositioning of discrepant material. To ensure that the disposition of discrepant material is responded to within seventy-two (72) hours at the Cleveland Valve Division.

2.0 SCOPE:

This QCO applies to the raw material, any parts received from outside vendors in-process and finished goods in the Cleveland Valve Division.

3.0 DEFINITIONS:

3.1 "Material" is referred to broadly as raw material, any part, component, or finished product used in the manufacturing process.

3.2 Discrepant material is any material which does not conform to all applicable product drawing requirements, operational sketch requirements, engineering specifications, material specifications, acceptance standards, quality requirements, process specifications, or TRW workmanship standards.

4.0 RESPONSIBILITY:

4.1 The quality assurance and manufacturing departments are responsible for ensuring that all nonconforming material is properly identified, segregated, dispositioned or disposed of within the established time. The quality assurance department is responsible for notifying the customer of any suspected or nonconforming material shipped to them.

4.2 The manufacturing/quality department is responsible for:

A. Stating the cause of the discrepancy.
B. Notification to the proper causing department or area.
C. Determining the action to be taken on discrepant material, i.e., standard repair, sort, scrap, use as is, or request a deviation.

QUALITY CONTROL:	ENGINEERING:	LAB.	CUST. REP.
INSPECTION: 3/31/92	MANUFACT.:	GOVERN. REP.	PREPARED BY: 31/3/9

TRW VALVE DIVISION

QCO.	406
DATE:	3/31/92
PAGE NO.	2 of 5

QUALITY CONTROL ORDER

TPPC-1993 REV. 3 PRINTED IN U.S.A.

SUPERSEDES:	QCO NO. 406	PAGE NO. All	DATED 2/8/90	PART NAME Valves

4.3 The quality department is responsible to interface with appropriate parties (plant manager, production manager, product engineering, process engineering, materials laboratory and the customer) and provide a timely response (72 hours) on deviation requests.

5.0 PROCEDURE:

5.1 If a nonconformance is found by a supplier, incoming inspection, lab, manufacturing, floor inspection or outgoing audit, the quality/manufacturing department will red tag the nonconforming material and affix the red tag to all logical groupings (tubs, pans, skids, pallets, boxes, etc.).

5.2 The following sections of the "do not use," red tag are to be filled out by the person initiating the red tag:

A. part number (FR)
B. date
C. originator's master number (inspection number)
D. reason held
E. quantity suspect
F. department
G. shift
H. shop order number and/or lot number
I. last operation completed

5.3 Quality department informs materials management and manufacturing of the nonconformance, and the customer if the nonconforming parts were suspected to have been shipped to the customer.

5.4 Manufacturing/material control moves the red tagged material to the appropriate bonded area.

5.5 Quality/manufacturing departments review the red tagged material in the bonded area for the following corrective action: scrap/repair/sort/use with deviation/use as is.

5.6 Quality department audits the red tagged material after the corrective action is taken and removes the red tag and records the corrective action.

QUALITY CONTROL:	ENGINEERING:	LAB.	CUST. REP.
INSPECTION: Frank Holupka	MANUFACT.	GOVERN. REP.	PREPARED BY:

TRW VALVE DIVISION

QCO - 406
DATE: 3/31/92
PAGE NO. 3 of 5

QUALITY CONTROL ORDER

TPFC-1989 REV. 3 PRINTED IN U.S.A.

SUPERSEDES:	QCO NO. 406	PAGE NO. All	DATED 2/8/90	PART NAME Valves

6.0 **DISTRIBUTION:**

6.1 The red tag will remain affixed to the nonconforming material until the proper corrective action is taken: scrap/repair/sort/use with deviation/or use as is.

6.2 The white copy of the red tag will be returned to the quality office. The quality office will issue a DMR report listing all material held in the bonded areas. The DMR report will be issued monthly to the manufacturing managers, the production control manager and the plant manager.

6.3 The red tag will be initialed and removed from the nonconforming material when the proper corrective action is taken. The red tag will be initialed by the person who audits the material for proper corrective action. The red tag will then be returned to the quality office.

QUALITY CONTROL:	ENGINEERING:	LAB.	CUST. REP.
INSPECTION: Frank Holupka	MANUFACT.	GOVERN. REP.	PREPARED BY:

TRW COMMUNICATIONS ON THE JOB II

OBJECTIVES

SESSION 7

- Active Listening Skills
- Job-related Vocabulary Improvement

BEST COPY AVAILABLE

COMMUNICATIONS ON THE JOB II
SESSION 7

ACTIVE LISTENING

WHAT IS LISTENING?

Listening is:

- Taking in information and the intent of talkers, other people and/or ourselves while withholding judgment and being empathetic
- Encouraging talkers to continue communicating
- Providing limited but positive input to a talker to carry the idea forward

To help us more fully understand what listening is, consider the following two questions:

1. What does it feel like to really listen to someone else?

   ____

   ____

2. What does it feel like when someone really listens to you?

   ____

   ____

COMMUNICATIONS ON THE JOB II
SESSION 7

THREE LEVELS OF LISTENING

Level One - Listening to both the content and intent of what a speaker is saying, nonjudgmentally and empathetically.

Level Two - Hearing, but not really listening. At this level, listeners hear the words, but often miss the deeper meaning conveyed by nonverbal signals.

Level Three - Passive listening or not really listening at all. Instead, listeners are daydreaming, or thinking about where they'll go for lunch, or concentrating on what they want to say next.

Three Levels of Listening

Everyone listens at different levels at different times. We listen better in some situations than in others. For example, some people listen effectively on the job, but "tune out" when they get home. Each of the three levels of listening has specific features to it. These levels are not distinct lines of differences, but rather, are general categories into which listening behavior falls.

Level One/At this level of listening we are using listening skills. We refrain from judging and being critical of the talker. Internal distractions are avoided or kept at a minimum. We place ourselves in the talker's position, attempting to see things from his or her point of view. This is what Janet was doing when she was listening to Jeff. Some characteristics of this level include: taking in main ideas; acknowledging and responding; not letting ourselves be distracted; paying attention to the total communication of the speaker, including his or her intent; not judging or finding fault; awareness of what the talker is expressing nonverbally.

Level one requires listening not only for the content of what's being spoken, but, more importantly, for the intent and feelings of the message as well. This is done while showing both verbally and nonverbally that we are truly listening.

Listening at Level One/In the video you just saw, Janet was listening to Jeff at level one. At this time you may wish to view the video a second time, noting any behavior you may have missed the first time. Particularly note how Janet is using level one skills.

Information we listen to at level one will be more easily remembered by processing what we are listening to. Processing means associating what is said with something familiar to us, repeating the information internally or out loud, or summarizing what the person has said. People speak at a rate of about 200 to 250 words per minute while listeners can process information at about 300 to 800 words per minute. What is done with that time lag will strongly influence what level we listen from.

In addition to using the association or summarization techniques, as a listener you can visualize what is being said by attempting to see in your mind's eye what the person is saying. In essence, you will be simultaneously listening to and seeing what is being said.

Depending on the situation or person, the levels of listening may overlap or interchange. As we move from level three to level one our potential for understanding, retention, and effective communication increases. We began developing our listening style very early in life. As we grow older we continue to reinforce our habits and patterns, although not many people are aware that they listen from these three levels and that each level has elements that affect listening effectiveness.

©Madelyn Burley-Allen, 1984

Level Two/At the second level of listening we move from an empathic, attentive listening state to one of "hearing." We hear words, but are not paying close attention to the talker's intent, tone or voice inflection, facial expression or body posture. We stay at the surface of communication and are unaware of the deeper meaning of what is being said.

At this level, we remain emotionally detached from the conversation, hearing words but not fully participating in the interaction. This level of listening can be dangerous because misunderstandings may occur since the listener is only slightly concentrating on what is said. Talkers could be lulled into a false sense of being listened to and understood at this level.

Level Three/When we are listening at this level we are in a passive, withdrawn state; in other words, "tuning the person out." This level includes daydreaming, mental tangents, thinking about something else, forming rebuttals, or thinking about what we are going to say when the other person stops talking.

Listeners do not remember much of what is said when listening at this level. It may be stored somewhere in the brain waiting for recall, but probably won't be recalled because we weren't paying attention. Listening at this level can be compared to some kinds of reading. If you have ever switched into "automatic" while reading a boring report or book and finished a page without having any idea what you have read, you can understand what level three listening is.

© Madelyn Burley-Allen, 1984

COMMUNICATIONS ON THE JOB II
SESSION 7

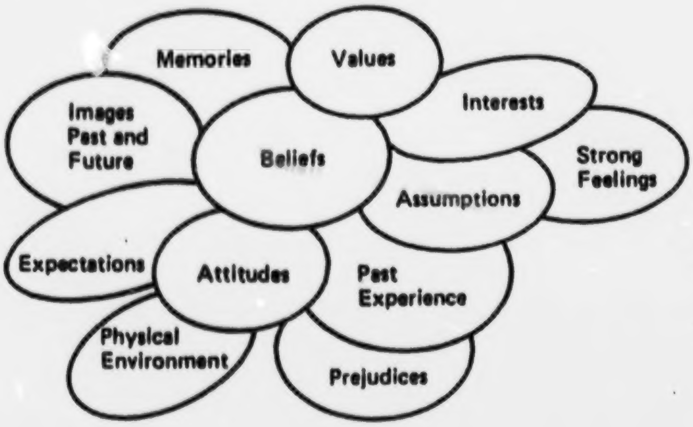
BARRIERS TO LISTENING

- Filters ____________________
- Biases ____________________
- Assumptions ____________________
- Hearing What We Want to Hear ____________________
- Cultural Myths ____________________
- Negative Emotions ____________________
- Negative Use of Time Lag ____________________
- Semantics ____________________
- Misreading Nonverbal Cues ____________________
- Physical Factors ____________________
- Daydreaming ____________________

SOME BARRIERS THAT PREVENT ME FROM LISTENING EFFECTIVELY:

Listening Through Filters

We are often unaware of how our childhood experiences influence our adult behavior. The socialization process results in our listening through filters. Our brain processes each new piece of experience through filters that have various forms. The following diagram shows some of the filters that exert the greatest influence:



Although these filters are within us, we are often blind to them. It is important to develop the ability to become conscious of these blind spots that often result in unproductive behavior. We will then have an opportunity to understand and reshape our beliefs, values, and attitudes.

People aren't aware of their beliefs so they have little opportunity to understand them and/or reshape them. When people aren't aware of how their beliefs influence what they value about work and their attitude toward certain behaviors in others, they find it difficult to listen to the other person's point of view or accept their behavior.

Say, for instance, I'm your supervisor, and I strongly believe that when people talk and enjoy their work they aren't getting their work done properly. Because of my belief, I value silence and seriousness on the job. I also have the attitude that people who kid around don't perform as they "should" and are more trouble than they are worth.

On the other hand, you believe that a relaxed and enjoyable working environment keeps work from being drudgery and makes it acceptable. Because of this belief, you value an understanding, easy-going supervisor. You have the attitude that a supervisor who doesn't kid around a little is a "turkey."

Now, if we both are unaware of our attitudes, we would probably have difficulty dealing with each other. We would both find it arduous listening to the other's point of view since the views are in opposition. Our beliefs could even lead to contempt for each other, thus interfering with our ability to work things out.

The belief that we hold in reference to each other's work behavior will result in both of us having certain expectations of each other, and because our beliefs are so different, our expectations are rarely realized, leaving us both disappointed and frustrated. On the other hand, if both of us could gain understanding of our own as well as the other's belief, we might start listening to each other's point of view.

HEARING WHAT YOU WANT TO HEAR

As you discovered in the preceeding quiz, a listening barrier exists when someone hears what he wants to hear and not what is really communicated. Barriers to listening happen because of one or several filters. For example, past experience filters can make a listener become anxious to hear something that fulfills his or her wishes or desires.

This often happens in business settings, where one person is selling merchandise to another and the salesperson wants the sale to be as large as possible. Jeanne related this story:

> I was working on the order desk for a company that supplied materials for large conferences. One week before, my supervisor had checked with a client about how many packets they needed for their program. She was told that they had only eight registrants. However, they expected more, and she was asked to check back with them.
>
> My supervisor was called out of town, and I was asked to follow up on this client. Well . . . I checked with them for the number of registrants they had now. The client told me eighteen. In my desire to sell the most materials possible, I heard eighty.
>
> Three of us spent three hours getting the materials ready. When the delivery man brought the materials to the client, he was told they only needed eighteen packets, not the eighty we had prepared. I could have fallen through the floor when he told me. I was so embarrassed!

Jeanne expected to hear a larger number because of her anticipation and desire to fill a large order. This caused her to hear incorrectly. As a result, the company lost three hours of work by three people.

BIASED LISTENING

Another block to listening occurs when we form an opinion about the level and value of what will be said. We label the information ahead of time as unimportant, too boring, too complex, or as being nothing new, and we are anxious for the speaker to get to the point.

A biased listener tends to distort the message positively or negatively, often getting so emotionally involved that listening efficiency suffers. Certain emotionally laden words, sometimes referred to as "red flag" or "buzz" words, can evoke strong feelings and thus create barriers to effective listening. We sometimes respond to a word or phrase in a way that has been conditioned by our past experiences. In other words, we have attached meanings to the same word from prior, emotion-laden situations. Sometimes words can affect a listener to such an extent that his reaction will result in Level 3 as his emotions are causing internal distractions to occur, thus interfering with Level 1 listening. Unconsciously, we tune out what we negatively label.

Every day words provoke different feelings or ideas in different people. These emotion-laden words often have a strong impact on people that interferes with listening. Tones of voice have the same kind of impact.

PHYSICAL BARRIERS

The last internal barrier is the physical barrier: what happens physically that influences an individual's listening efficiency. At certain *times of the day,* we have more energy than at others. *Fatigue* is a factor in listening, since listening takes concentration and effort. When we don't feel up to par, we have a more difficult time being attentive.

It is easier to daydream and become preoccupied when our energy level is low. When we have personal problems, our energy is often used to deal with the problems, which lessens the amount of energy we have available to listen at Level 1. Personal problems sometimes manage to creep into our minds while someone else is talking.

Another element that can cause fatigue is the "time-lag factor"; the average speaker talks about 200 words per minute, while a listener can process information at around 300-500 words per minute. It is easy to spend this time-lag daydreaming, going on mental tangents, and thinking of personal problems. It takes energy to use this time difference for more productive use, such as internally summarizing what the person said, visualizing what is being said, or associating what is being said with something already stated. Because Level 1 listening takes energy and concentration, it is easy to allow these factors to interfere with it.

The fatigue barrier is often prevalent during meetings, especially those held at the end of the day or in the evening. People attending have already expended considerable energy getting the day's work done. Along with this low-energy factor, listening at meetings can be boring. Most often, the agenda does not have the same interest for all those who are attending.

In this case, it would be important to listen at Level 2 to make sure you aren't missing information you will need. If what is being said pertains to you, you could then move to Level 1, in which you would process the information. You might even want to jot down some notes to be used later as memory-triggers.

SEMANTIC BARRIER:
THE MEANINGS ARE IN PEOPLE, NOT WORDS

We each have our own meanings for words because we filter them through our varied beliefs, knowledge, education, upbringing, and experience. As a result, no two people have exactly the same meaning for the same word or expression; meanings are not in words, meanings are in people.

The dictionary contains thousands of words. However, the average adult uses about 500 of these words most often, and each has between twenty and twenty-five meanings! So, two people can use 500 words with the possibility of 25,000 different meanings!

A word is simply a representation of the thing it names or describes. It is not the thing itself, and may mean something different to the speaker than it does to the listener. The practice of summarizing what you believe the speaker said, as a check, can insure understanding.

We make judgments about people, based on how we understand what we see and perceive. We evaluate an individual's competence and motivation through our semantic filters.

Have you ever tried to moderate between two people who are arguing, and you had to say, "Wait a minute, he didn't say what you said he said." Usually, people do not purposely change what people say; they simply do not hear the same words in the same way that the words were said. I have a sign that I display in my seminars which reads: "I know you believe you understand what I said, but I'm not sure you realize that what you heard is not what I meant." Everyone receives sensory data in a unique way; it is not "raw" data, but rather, data that is filtered and interrupted by the receiver.

THE EFFECTS OF EMOTIONS ON LISTENING

Along with words that affect our biases that lead to emotions, there are some areas we do not want to talk about, topics that we have an emotional reason for not wanting to discuss . . . these areas are also "hot buttons" for us. When another person pushes our "hot buttons" with a word, phrase, or topic, our mind goes through certain filters: past experiences, beliefs, or biases connected to what the other is saying. As a defensive measure, we often "tune out" the talker, plan rebuttals, or formulate questions to confuse the talker.

If something is said that might cause us to change our perception, we feel threatened. Potential change in our perceptions can involve strong feelings. Often, the first feelings are frustration and confusion. To reduce these feelings, we flee mentally from what is being said by tuning out what the talker is saying or by distorting it so we won't have to alter our perception, belief, or opinion.

Experiencing high emotions, either positive or negative, usually interferes with listening ability. Strong feelings are one barrier that influences effective listening and sometimes causes confusion and the taking in of information in a disorganized manner, as illustrated by June's experience.

> I'm a case worker, which means I deal with people who come into our agency for help finding a job. I was so sympathetic to what they were saying, I became overly emotional and found it difficult to think objectively. When I did this, I couldn't think effectively and didn't obtain all the information I needed to match the client to the proper job.

June had developed a habit of listening almost entirely with her feelings. As a result, she was not taking in the kinds of information she needed to get her job done properly. She often became overanxious, which accelerated her tension level.

Facilitator7-8A

COMMUNICATIONS ON THE JOB II

SESSION 7

STYLES OF LISTENING

The Faker -	Fakers pretend to listen, but they are actually so caught up in giving the impression that they're paying attention that they really are not listening at all:
The Dependent Listener -	Dependent listeners want to please others, so instead of listening, they're concentrating on what kind of impression they're making on the other person.
The Interrupter -	Interrupters are so focused on what they want to say that they often don't even hear others, and worse yet interrupt them while they're talking to make a point that usually isn't related to what the talker is saying.
The Self-Conscious Listener -	Self-conscious listeners focus on well the conversation is going, on if they're creating a positive image when they're speaking, and on the appearances of themselves or others. Since they're so distracted by how things are going, it's hard for them to listen effectively to what's being said.
The Intellectual or Logical Listener -	Intellectual listeners hear only what they want to hear. They often concentrate on the facts only, ignoring emotional or nonverbal communication. So, what they really do is block out more than half of what the talker is really trying to communicate.

STYLES OF LISTENING

The Faker

Some people fake attention. They pretend to listen when their minds are actually off on a flashing tangent. They may fake attention because they think they are pleasing the talker. Often, people who wish to be attentive have their eyes riveted on the speaker. Their ears appear to be wide open. They so exhaust themselves in playing the attentive role that they end up no longer listening at all. Have you ever watched a person fake listening by smiling and head-nodding, when neither the smile nor the head-nodding matched what the speaker was saying?

Others try hard to fake being good listeners by trying to memorize every fact given; thus, the intent of the message becomes lost. However, they give the impression of listening with intense interest and curiosity. This need to hear and digest everything being said can easily lead to an overloading and jamming of the communication network.

The Dependent Listener

Some listeners are highly dependent and live vicariously through the opinions, wishes, and feelings of others. Often, their feelings are evoked in interpersonal communication situations, making it difficult for them to deal with abstract matters. So much concern is given to how they are listening and reacting to the talker, that they miss out on what is actually being said. In their urgency to elicit a favorable impression from the talker, they focus on how they appear to others, rather than on the clarity and content of what they are saying.

> Dave's father dominated his relationships when he was young. He often told Dave, "Children should be seen and not heard." When Dave expressed an opinion on a subject, his father told him he was stupid and not old enough to know the right way to do things. Often in their interactions, Dave's father would say, "You'd better listen to every word I'm saying, young man!"
>
> As a result of this communication, Dave became a dependent listener. He put his effort into appearing to listen in order to please others. He often felt confused and frustrated. He also felt like a doormat because he went along with other people's wishes at the expense of his own. He discovered he didn't have many opinions of his own because he let others do his talking for him. In his relationships with his co-workers, he was afraid to say no. This behavior pattern resulted in his feeling tense, unhappy, and victimized.

The Interrupter

Sam had a habit of interrupting when others were talking. He thought he'd forget what he wanted to say if he didn't interrupt. He often felt anxious if he wasn't able to say what was on his mind. Many times, the people he worked with became frustrated and annoyed by his behavior.

While completing a self-awareness exercise, he discovered he was so busy focusing on what he wanted to say that he listened at Level 2 or 3. In the process, he wasn't considering the speaker's needs. During a practice session, in which he had to paraphrase what the other said, he became conscious of his internal process. He started to think of what he wanted to say after the speaker had spoken only a few words. After he became aware of this internal process, he could stop and direct his attention to what the speaker was saying. He found he could remember what he wanted to say by associating what the speaker had said with the information he wanted to discuss.

Bringing up something that doesn't relate to what the speaker is saying is another form of interruption. Often, this is done when the talker is discussing something the listener is uncomfortable with and feels threatened by. The listener takes the conversation off on unrelated tangents, as a means to side-step the issue being discussed. The speaker gets so involved in the side issue, the real issue is never dealt with.

Paul had an employee, Fred, who came late to work three to four times a week. Paul had approached Fred about his lateness on several occassions. He became discouraged because the conversation ended up going around in a circle.

Paul: You came in 15 minutes late again this morning. You should be on time.
Fred: I'm a good worker, and I've been with the company ten years.
Paul: I think you're a good worker too, but you have to be at work on time. That's the rule!
Fred: I can't do everything right. I keep trying to get to work on time, but I just can't seem to do it. Anyway, I get my work done.
Paul: Why don't you get up earlier in the morning as I told you to!
Fred: I try to, but I can't. Anyway, Janet over there takes longer breaks than I do. I don't know why you only pick on me.
Paul: I don't think Janet takes longer breaks than anyone else in the office. I don't pick only on you. When others infringe on the rules, I talk to them too. Can you try to get to work on time from now on?
Fred: Yeah, I'll try.

This can be a discouraging and frustrating experience, yet it happens often. Problems don't get resolved when one person is able to side-track the real problem. When you find yourself in this situation, a couple of statements can be used.

For example when Fred said, "I'm a good worker, and I've been with the company ten years." Paul could have said, "I appreciate your good work and time with the company, but that's not the reason for this discussion. The issue is your lateness. I want it to stop, and I want to know how you are going to end this situation."

Or, when Fred said, "anyway, Janet over there takes longer breaks than I do," Paul might have said, "That's not the issue here," or, "That's not relevant to our discussion; we are talking about your lateness," or, "Right now I'm only concerned about your lateness."

By using such statements, Paul could control the discussion *and* solve the problem.

The Self-Conscious Listener

Some individuals focus too much attention on themselves by thinking, "Am I doing well or badly?" "Do I look all right?" or "I wonder if the talker thinks I'm intelligent?" These people give attention to themselves as participants when it would be better to involve themselves in the content and meaning of the conversation.

Self-consciousness can also be viewed as a kind of preoccupation with internal matters at the expense of effective listening. When people become too concerned about how well the discussion is going, they often lose their spontaneity and become overly involved with themselves during the conversation. Our society has unspecified standards as to how much people are allowed to be carried away by the talk, and how thoroughly they are to permit themselves to be caught up in the conversation. People who become too involved give the impression that they don't have self-control over their feelings and actions. This can lead the listener to draw away from involvement with the other person. What is one person's over-eagerness can be another's alienation. In this kind of situation, the speaker is forced to adjust to the listener's state of emotion because the listener is incapable of adjusting his own.

The Intellectual or Logical Listener

The intellectual listeners listen mostly with their heads, hearing only what they want to hear, blotting out larger areas of reality. Because they are mainly interested in a rational appraisal, perhaps as a result of their educational training, they tend to neglect the emotional and nonverbal aspects of the speaker's behavior. Their evaluation of what is said is most often geared to the interpretation of verbal statements, often causing them to miss the speaker's less obvious intent.

They are not aware of how listening behavior affects others or how others affect them. They listen in terms of categories, making certain that what they listen to does not disturb their inner peace or systematic order. It is almost as if they are putting what the talker is saying into a computer's data bank. If a statement doesn't fit into a systematic logical sequence, their minds reject what is said as invalid. I refer to this process as getting into "analysis paralysis."

These types of listeners are so involved in programming what is being said, that they miss out on the deeper meaning of what is spoken. These types of listeners cut off experiencing through the sensory system, thus losing the opportunity to actually experience the event. The brain is so busy making calculations, that the body isn't given the chance to feel the communication. As a result, nonverbal communication is disregarded. All this is happening because the listeners are blind to their own emotions and the emotions of others.

> Frank was a computer programmer whose job demanded that he analyze information focusing on what might be wrong or how a program could be improved. To succeed at his work, he had to pick information apart, listen to what could go wrong, and compute information in a logical, systematic manner.
>
> He was so busy analyzing what was communicated to him, he didn't have time to just be there with the other person. His wife often told him he was a nit-picker. She felt he was overly critical of her and the children because he seldom accepted what she said. He would challenge her thought processes. He spent most of their communication time analyzing what she said as if he had to turn it into a program.
>
> This listening pattern had a serious effect on his marriage and social life. After becoming aware of the pattern, he took steps to change it outside of his job. It took a lot of concentration and effort to change this pattern, but he said it was more than worth it.

COMMUNICATIONS ON THE JOB II
SESSION 7

OK ATTITUDES

1. I'm OK - You're OK

2. I'm OK - You're Not OK

3. I'm Not OK - You're OK

4. I'm Not OK - You're Not OK

OK Positions

The socialization process includes the position of "OKness" in relation to self and others. According to Dr. Berne's theory, there are four positions: (1) I'm OK-You're OK, (2) I'm OK-You're Not OK, (3) I'm Not OK-You're OK, and (4) I'm Not OK-You're Not OK either, so there!

The listening behavior of individuals in the different OK positions varies; thus, each has different listening characteristics that include one's beliefs about oneself and others which, in turn, influence the attitudes and ways a person interacts with others.

Greg's father's style of listening matched the "I'm OK-You're Not OK" pattern. Greg, a supervisor in a large federal agency, incorporated many of his father's listening behaviors. As a result, his employees didn't feel that he listened to them. Greg had the attitude, "Who needs to bother listening to "Not OK" people; they don't have good ideas anyway."

Others in the office often complained that Greg listened to them with a critical expression on his face. He would quickly judge and criticize what they had said. And, he seemed to listen only to what he had to say, as if he were the only one who had good ideas. When someone brought up an opposing point of view, Greg would hear what he wanted to hear, filtering out comments he didn't agree with. His manner and listening style often left people feeling dumb and stupid. Thus, Greg listened much the same way as his father, not realizing how his behavior was negatively affecting others. In other words, this listening behavior was in his blind area.

Kathy, on the other hand, held the "I'm Not OK-You're OK" position. Her behavior was very different from Greg's. She often worried about herself and how she was coming across. She focused on herself rather than on the dynamics of what was going on between herself and others. She was so busy trying to say the right thing, she usually didn't say anything. During meetings, she was reluctant to speak up because she believed what she had to say would be stupid. She often said, "I will probably say something dumb, so why bother!" Because she was behaving from the "Not OK" position, she usually listened at Level 2 or 3. The consequences: instructions carried out poorly, messages taken down incorrectly, and frequent criticism from her supervisor.

The "Not OK-Not OK" position is very detrimental to listening and the entire communication process. People behaving from this position vaccilate between the two before-mentioned OK positions. They listen most often from Level 3, and as a result, do not hear others. They do not make the effort to listen to what others say. Since neither they nor the others are OK, they find very little reason to bother listening, they are rarely interested in what anyone has to say. They are usually perceived as disinterested in others, withdrawn, negative, and pessimistic. This behavior leads nowhere. It's felt by those experiencing it as "going around in circles," ending in frustration, anger, and discouragement. You'll hear these people say, "I can't do anything; there's nothing anyone can do!" Because of the attitude, not much *does* get done. Problems don't get resolved, and the same ones crop up over and over.

On the other hand, if parents, teachers, and other adults model effective listening behavior by focusing attention on speakers, acknowledging speakers without being judgmental, and communicating through their faces, bodies, tones of voice, and words, that the speakers are important, children will be more likely to develop positive concepts, exhibit effective listening behavior, and operate from the "OK–OK" position. Effective listening patterns, as well as non-listening patterns, can become habitual. Undesirable patterns *can* be changed, although it requires continual awareness and practice.

Where the "Not OK" styles usually close off communication, the "OK-OK" style is categorized as open, understanding, logical, empathic, and relaxed.

Allan described his parents as understanding and easy to talk to, tolerant, and accepting of his behavior. Whenever he had a problem, they would listen and help him come to a solution while supporting his decision and encouraging him to follow it through.

As a manager, he applied these same listening skills to the people on the job. His expectations of himself and others were realistic and valid. People felt comfortable around him because he didn't quickly judge or criticize. He had a mutual respect for himself and others while accepting the significance of people. Co-workers often said, "I like him; he really listens to me."

Like Janet in Chapter 1, he listened with understanding, had an open mind, and didn't interrupt or ask unnecessary questions. He often reflected feelings that were expressed by paraphrasing for understanding and summarizing for mutual clarification.

Being aware of this "OK" phenomenon, this aspect of human behavior and how it influences listening, can be beneficial in quickly improving listening behaviors. It's an easy way to modify your behavior in a short time.

Drama Triangle

Another aspect of the socialization process is the "drama triangle." When individuals act from the "Not OK" behavior mode, they frequently participate in a drama triangle that has three types of participants: persecutor, rescuer, and victim.[4]

The *persecutor* operates from the "I'm OK-You're Not OK" position. People behaving in this mode often are fault-finding, nit-picking, can't wait to say "gotcha," and are blemish players; no matter what you pass over their desk, they find something wrong with it and might even circle the mistake in red so you have to do it over again. Persecutors are experts at zeroing in on what people do that's wrong, rather than right. Their management and supervisory styles are to "manage by exception–what goes wrong is what is paid attention to." If something is out of line, they give a negative stroke. They are quick to form a rebuttal to what has been said, and often listen to how something is going to fail or not work. People often feel as if they are being treated like dumb and stupid children after communicating with a persecutor.

Rescuers are advice givers. They take on other people's monkeys and make the problems their own. These people are rescuing others who don't need to be rescued, don't want to be rescued, and aren't asking to be rescued —but they rescue them anyway because it's good for them! They take over others' responsibility; they have to do it themselves. Like persecutors, they are operating from the "I'm OK-You're Not OK" mode. They have a strong need to be relied upon and feel OK when doing things for others. They tell their employees what to do and when it doesn't go right, the rescuers get blamed, and thus, end up victims.

They tend to be lousy delegators—"gotta do it themselves." This results in feeling victimized because their own work doesn't get done and pressures build up. They end up working 10–12 hours when everyone else is going home on time.

They build dependency relationships between themselves and their employees by solving the employee's problems, doing their thinking for them, and figuring out what should be done. They become indispensable and have constant interruptions during the day. When a person is talking, they are so busy thinking of the best advice to give, they don't listen to the whole problem; as a result, often, the advice given is inappropriate.

> Tim, a supervisor, found out that he often listened and behaved from the rescuer mode. He decided that not only was it detrimental to his employees' professional growth; he also discovered that the rescuer mode left him little time for his own work and was plagued by interruptions. He found some distinct advantages to giving it up: he had more time for himself, he finished his own projects on time (resulting in less hassles from his boss), he felt decreased stress and tension, and the people he supervised became more self-reliant and confident. He said he had to be on his toes to stop himself from giving advice, often stopping himself in the middle of a sentence. Tim discovered that his listening habits changed. Because he stopped forming advice in his head while the person was talking, he listened more frequently at Level 1. As a consequence, he remembered more of what was said to him.

Like Tim, some people behave from the rescuer mode by taking on others' responsibilities, doing others' work, thus not having time to do their own. When people do this, they end up victims. Therefore, they have moved from the rescuer mode to the victim mode. Then there are others who *start* in the victim mode by behaving in such a way that they incite others to "kick" them verbally, nonverbally, emotionally, or physically.

When people start out in the victim mode, they are operating from the "I'm Not OK-You're OK" position in ways that result in their getting negative strokes: not listening to directions, allowing their emotions to over-ride their objectivity, and becoming defensive instead of listening. Marie, a secretary in a computer company, discovered she behaved from this position in her relationship with others—especially her boss:

> I often feel victim in my interactions with my boss. I think he is the persecutor and I'm the victim. For example, late Thursday afternoon,

> my boss gave me a twenty-page project with graphs and numerical tables to type and finish by Monday at 10 a.m. I didn't listen to the time he stated when he handed me the project. Instead, I was busy figuring out how I was going to get it done and finish the other work I had on my desk. All I heard was Monday.
>
> As I look back on this situation, I can see that by not being clear on the time, I was already setting myself up to be a victim. Discussing with him my concern about getting it out on Monday, along with completing the other assignments on my desk, would have kept me out of the victim position.
>
> In any event, I didn't take either of these options. Instead, I became nervous and frustrated, which led to errors and my typing the project more slowly. By 10 a.m. Monday morning, I had it typed but not proofread. You can imagine my surprise when my boss asked for it! I told him I didn't hear him say it was due at 10 a.m. It was finished, but not proofread. Naturally, he became angry at my comment that I didn't hear him say it was due at 10 a.m. and he said a few choice words I won't repeat. However, he reluctantly extended the time by an hour so I could get it proofread.
>
> Well, by this time I was so nervous I had to have a cup of coffee. I took the report down to the cafeteria. Again, I can see this was another set-up on my part to end up victim. You don't take important projects to the cafeteria. It would have been better to forego the coffee until after I'd proofread the material. But . . . I didn't!
>
> While I was proofreading, an emergency came up. In my hurry to take care of the emergency, I left the report on the table, completely forgetting it. Guess who came down to the cafeteria and found the report? Yep! My boss. He brought the report to me and said critically, "Are you by any chance looking for this?" and threw it on my desk. Was I embarrassed!

This example was just one of the many ways Marie discovered that she set herself up to be victim. Upon examining her listening habits, she found that her nonlistening habits resulted in other kinds of nonproductive behavior such as not completing tasks as directed. She discovered she talked to herself mentally while her boss was giving her instructions. This internal dialogue distracted her from what was being said. She found she could stop this internal process by being aware of it, stopping the dialogue, and then summarizing what the other person said as a way of checking her listening.

These "OK" life positions play a major part in each person's listening behavior. As you can see from the graph that follows, these positions of "OKness" are formed early in childhood. They are a reflection of our self-concept and they influence our attitudes about others that can result in ineffective or effective listening behavior. Being aware of what "OK" positions we are listening from can be a giant step in improving our listening habits.

This socialization process is an important ingredient in determining the "OK" positions from which people behave. It is a significant factor that causes many of the listening problems people experience. Graphically, the process is summarized like this:

SOCIALIZATION PROCESS

①

Childhood experiences

Influences →

- Family system: verbal, nonverbal communication patterns
- Personality of close adults
- Positive, negative recognition, attention (strokes)
- Don't messages

②

Early childhood decisions—the beginning of the self-concept

Influences →

- Imageries of self:
  - —internal dialogue
  - —affirmations of self, positive or negative
- I can't do anything right
- I'm stupid
- I can think
- I do things right

③

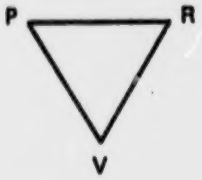
"OK" life positions: feelings of "OKness" or "Not-OKness" of self and others

- "I'm OK-You're OK"
- "I'm OK-You're not OK"
- "I'm not OK-You're OK"
- "I'm not OK-You're not OK"

Influences ↓

④

Drama Triangle



← Influences

⑤

Adults' self-concept and beliefs:

- Which is demonstrated in the following ways:
  - —Attitudes
  - —Prejudices
  - —Values
  - —Perceptions
  - —Behavior and feeling patterns

Video Exercise 2-1

Video Overview/This video vignette is divided into two segments. Both portray a supervisor, Paul, confronting one of his employees, Fred, about his tardiness. The first segment shows Paul talking to Fred about his tardiness from the not-OK attitude mode. You will be asked to write down your observations of both Paul and Fred.

Turn on the videotape to the vignette "Lateness — Poor Model." Watch and listen to the brief dialogue between Paul and Fred. Observe specifically what Paul does to prompt Fred to respond in a negative manner.

Video Instructions/Before carrying out these instructions read them over carefully.

1. Turn on the videotape to the vignette "Lateness — Poor Model."
2. Listen to and watch the two-minute confrontation between Paul and Fred. When the vignete is over turn the tape off. You will watch the good model after you have written your responses to the poor model.
3. After you have listened to and watched the vignette, open your "Participant Exercise Booklet" to page 2-5 and answer the questions.
4. After completing the questions, turn to page 2-6 in your "exercise booklet" to find an explanation of the answers. Compare your answers to the explanations to find out how you did.

© Madelyn Burley-Allen, 1984

COMMUNICATIONS ON THE JOB II
SESSION 7

VIDEO VIGNETTE - LATENESS - POOR MODEL

1. What kinds of behavior did Paul use that indicated he was in a not-OK attitude mode?

2. How did Fred respond to Paul's not-OK behavior?

3. Do you think the lateness problem has been solved? Why or why not?

Understanding the Listening Process

1. What kinds of behaviors did Paul use that indicated he was in a not-OK attitude mode?

   Paul sat on his desk. He pointed and shook his finger at Fred. He used *should* and *have to*; words that many people have an emotional reaction to. Because of Paul's manner, Fred felt threatened and attacked. Paul's tone of voice was condemning, angry and he had a critical look on his face. Paul did not ask questions that could have helped Fred work through his problem, instead he told him what to do.

2. How did Fred respond to Paul's not-OK behavior?

   Fred responded by becoming defensive. He tried to justify his behavior by pointing the finger at another employee hoping to divert Paul's attention.

3. Do you think the lateness problem has been solved? Why or why not?

   The problem hasn't been resolved. The interaction was one of attack and counterattack. Since Fred didn't solve his own problem, he had no interest in making it work. The exchange was more like a parent telling a child to be on time. This kind of behavior doesn't usually work with adults.

© Madelyn Burley-Allen, 1984

Video Instructions/Before carrying out these instructions read them over carefully.

1. Turn on the videotape to the vignette "Lateness — Good Model."
2. Listen to and observe the two-minute confrontation between Paul and Fred. When the vignette is over turn the tape off.
3. After you have listened to and watched the vignette, open your "Participant Exercise Booklet" to page 2-8 and answer the questions.
4. After completing the questions, turn to page 2-9 in your "exercise booklet" to find an explanation of the answers. Compare your answers to the explanations to find out how you did.

C15

© *Madelyn Burley-Allen, 1984*

COMMUNICATIONS ON THE JOB II
SESSION 7

VIDEO VIGNETTE - LATENESS - GOOD MODEL

1. What were the main differences between the two demonstrations?

2. What indicated to you that Paul was listening to Fred at level one in the OK-OK attitude mode?

C16

1. What were the main differences between the two demonstrations?
   - **Paul was sitting in a level position.**
   - **Paul didn't say *should* or *have to*, or point/shake his finger at Fred.**
   - **Paul didn't get sidetracked when Fred pointed out the other employee's behavior, but brought the conversation back to the lateness issue.**
   - **Paul was calm, direct and kept the conversation moving toward a solution.**
   - **Paul avoided labeling Fred's behavior by describing it instead.**

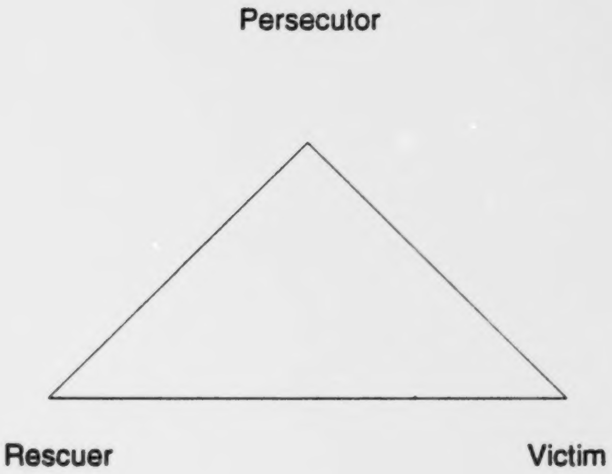
2. What indicated to you that Paul was listening to Fred at level one in the OK-OK attitude mode?

   Paul acknowledged what Fred said by responding to his feelings and summarizing what Fred said. His OK-OK listening mode was a major factor in the willingness of Fred to take action to solve his own problem.

©Madelyn Burley-Allen, 1984

COMMUNICATIONS ON THE JOB II
SESSION 7

THE DRAMA TRIANGLE



Video Exercise 2-2

Video Overview/In reading assignment 2-2, you learned that not-OK attitudes move people into the "Drama Triangle." In this next vignette you will watch a manager, Tim, discussing with Marian, an assembly line supervisor, the problem she is having with excessive rejects on her line. You will watch and listen to how Tim starts to solve Marian's problem for her, becomes aware of what he is doing, and moves out of the rescuer mode and asks Marian what her ideas are. Pay special attention to how Tim's behavior affects Marian in a positive way.

Turn on the videotape to the vignette "Staying Out of Rescuing." Listen to and analyze the four-minute discussion between Tim and Marian.

Video Instructions/Before carrying out these instructions read them over carefully.

1. Turn on the videotape to the vignette "Staying Out of Rescuing."
2. Listen to and watch the discussion between Tim and Marian. When the vignette is over turn the tape off.
3. After you have listened to and watched the vignette, open your "Participant Exercise Booklet" to page 2-12 and answer the questions.
4. After completing the questions, turn to page 2-13 in your "exercise booklet" to find an explanation of the answers. Compare your answers to the explanations to find out how you did.

© Madelyn Burley-Allen, 1984

COMMUNICATIONS ON THE JOB II
SESSION 7

VIDEO VIGNETTE - STAYING OUT OF RESCUING

1. What did Tim do to stop himself from rescuing Marian?

2. What effect did Tim's listening behavior have on Marian?

1. What did Tim do to stop himself from rescuing Marian?

   Instead of telling Marian what she ought to do, Tim paused, moved back in his chair and said to Marian, "What are your thoughts about what you could do to resolve the problem?"

   He avoided rescuing Marian again when she asked him, "What do you think I should do?" by saying, "Before I answer your question, let's take a minute to look at some of the things that can help employees become more conscious of quality."

   Tim provided Marian with a framework to analyze her problem, explore alternatives, and solve the problem herself.

2. What effect did Tim's listening behavior have on Marian?

   Marian's confidence in herself was raised because she found out she could solve her own problem. Her opinion of Tim and their relationship was enhanced, allowing them to work more cooperatively. Her competence as a supervisor was improved.

©Madelyn Burley-Allen, 1984

COMMUNICATIONS ON THE JOB II
SESSION 7

VOCABULARY # 4

SPC

Median

Fillet

Profilometer

Thimble

Comparator

Schematic

Projection

TRW COMMUNICATIONS ON THE JOB II

OBJECTIVES

SESSION 8

- How to Deal with Difficult Communication Situations
- Role-playing Exercise
- Job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB II

SESSION 8

DEALING WITH DIFFICULT COMMUNICATION SITUATIONS

Many factors combine to create difficult communication situations. Can you name a few? Participants have blanks in which to enter factors that will come up in discussion. The factors below are offered as suggestions.

Personality styles.

Perceptions (different for every person).

The situation (What's going on at the moment?)

Past histories.

Emotions. Assumptions.

Others:

Brainstorm any that the participants will add.

Communication does not occur in a vacuum. Any communication situation involves people, words, emotions, attitudes, and non-verbal interactions. Can you name any other ingredients that add to the communication "stew"?

Job stresses.

Home situations.

Time constraints.

Promotions.

Work environment (hot, cold, etc.)

COMMUNICATIONS ON THE JOB II

SESSION 8

FACILITATOR NOTE

Read through participants page 3-2 as a class. To tend to lower level readers, facilitator may need to read aloud. May want to have participants volunteer to read some of the statements, e.g. facilitator reads you-blaming and participants take turns reading I-message approach. Some persons with previous communication training may identify the I-message approach with "I statements". The two formats are quite similar and the other may be reviewed if time permits.

I- Statements (I- Messages)

When you describe behavior, I feel state how you are affected with feelings included. It would be helpful if provide possible change in behavior .

See **APPENDIX** for additional info. on what that reference calls the I-Rational Approach.

COMMUNICATIONS ON THE JOB II
SESSION 8

DEALING WITH DIFFICULT COMMUNICATION SITUATIONS

The I-Message Approach

	I-Message Approach		You-Blaming Aproach
1.	This approach leads to a win/win win/lose resolution.	1.	This approach usually leads to a resolution.
2.	A plan of action is developed.	2.	There's no plan of action.
3.	One person discloses something he or she is unhappy about in hopes of changing both people's behavior to solve the problem.	3.	One person discloses something he or she is unhappy about with the intent of letting the other person know he or she should change.
4.	This approach uses the OK-OK attitude mode.	4.	This approach uses one of the not-OK attitude modes.
5.	This approach promotes confrontation that is objective, and not overly emotional.	5.	This approach promotes confrontation that dumps negative feelings on another person.
6.	The person is aware of nonverbal behavior, both his or hers, and the other person's.	6.	The person is unaware of either person's nonverbal behavior.
7.	The person states a message in a nonblaming, noncritical manner.	7.	The person states a message in a blaming, critical, judgmental manner.
8.	The person takes responsibility for his or her own feelings.	8.	The person blames the other person for his or her feelings.
9.	The person observes and states specifically and nonjudgmentally what behavior is causing a problem.	9.	The person labels the behavior as good or bad, right or wrong.
10.	The person tries not to use words that push the other's hot buttons.	10.	Deliberately uses words that push the other's hot buttons.

COMMUNICATIONS ON THE JOB II
SESSION 8

DEALING WITH DIFFICULT COMMUNICATION SITUATIONS

The I-Rational Approach

Some Examples

I-Rational Statement	You-Blaming Statement
I'm embarrassed when you criticize me in front of my co-workers. I feel it's degrading to me.	You're always embarrasing me by criticizing me constantly in front of my co-workers.
I feel angry when you don't get your work done on time. I think it makes the whole department look bad.	You make us look bad because you never get your work done on time.
I expect you not to take longer than 10 minutes for a coffee break.	You're always taking long breaks.

Now it's your turn. Below are two you-blaming statements. Change them to I-message statements.

I-Rational Statement	You-Blaming Statement
	You always leave your workstation a mess and I'm stuck cleaning up after you.
	You never tell me what's going on. You act like I don't even work here.

COMMUNICATIONS ON THE JOB II
SESSION 8

DESCRIBING BEHAVIOR

DO's	DON'Ts
DO Stay with what a person does.	**DON'T** Make comments about what you think a person is.
DO Use adverbs that relate to specific actions.	**DON'T** Use adjectives that label someone.
Ex: He talked loudly in the meeting.	Ex: He's a loudmouth.
DO Describe what occurred.	**DON'T** Use labels that judge what's happened.
Ex: When we don't agree, the problem usually doesn't get resolved.	Ex: You're wrong to be so stubborn.

COMMUNICATIONS ON THE JOB II
SESSION 8

Video Exercise 6-1

Video Overview/In this exercise, you will analyze four vignettes of people labeling and describing behavior. Each vignette is a short, one sentence demonstration. Turn the tape on and watch "Describing Behavior #1." You will listen to a person make a one sentence labeling statement to another. After a slight pause the scene will be repeated, but this time the person will make a descriptive statement. Notice how well the person describes behavior. This same procedure will be repeated for the other three vignettes. Pay attention to the difference between the two approaches and the impact each has on the person receiving the statements. In addition, notice the facial expression, tone of voice and manner of the person making the statements.

Video Instructions/Before carrying out these instructions read them over carefully.

1. Turn on the videotape to the vignette "Describing Behavior #1."
2. Listen to and watch how the labeling, judgmental statement is delivered. There will be a slight pause, then the demonstration will be repeated, but stated descriptively.
3. You will repeat this same procedure for the next three vignettes.
4. After you have listened to and watched the four demonstrations, open your "Participant Exercise Booklet" to page 6-3 and answer the questions.
5. After completing the questions, turn to page 6-4 in your "exercise booklet" to find an explanation of the answers. Compare your answers to the explanations to find out how you did.

© *Madelyn Burley-Allen, 1984*

COMMUNICATIONS ON THE JOB II

SESSION 8

VIDEO VIGNETTE - DESCRIBING BEHAVIOR #1, #2, #3 AND #4

1. What is the most significant difference between the two kinds of statements?

2. What are the main benefits of the describing behavior approach?

COMMUNICATIONS ON THE JOB II
SESSION 8

1. What is the most significant difference between the two kinds of statements?

   The most significant difference between the two approaches is that the describing approach decreases the possibility of the person hearing the statement as a put down. It is easier for a person to listen to what he or she has done than to listen to a judgment of their behavior.

2. What are the main benefits of the describing behavior approach?

   The main benefits of the describing behavior approach are:

   - **It is more factual**
   - **It is easier for the person listen to and accept the statement**
   - **It reduces the tendency of the person to respond defensively**
   - **It helps move the discussion into a problem solving mode**

©Madelyn Burley-Allen, 1984

COMMUNICATIONS ON THE JOB II
SESSION 8

DESCRIBING BEHAVIOR EXERCISE

Change the statements below to describe behavior rather than label people. You'll have to use your imagination to fill in specific facts.

Sally, you're just trying to show Geri up.

Rick, you're such a slowpoke.

Carlos, you're very rude.

Don't fly off the handle now, Marla.

COMMUNICATIONS ON THE JOB II
SESSION 8

POSITIVE FEEDBACK VS. PRAISE

Positive Feedback	Praise
A positive comment with meaning that specifically lets the listener know what the speaker values	A positive judgment with little additional meaning
Specific, related to a task	General and non-specific
A statement of observation and appreciation	Value judgment such as right, wise or good
Identifies behavior and describes the listener did	Labels behavior and judges what the listner did
Rings true	Can be taken as phony

COMMUNICATIONS ON THE JOB II

SESSION 8

Video Exercise 6-2

Video Overview/Now that you have had an opportunity to practice distinguishing between praise and positive feedback, let's observe how well Jon, June and Stella state positive feedback statements to another person. The three vignettes are one sentence demonstrations. The first statement made will be one of praise. After a slight pause the vignette will be repeated but this time the person will make a positive feedback statement.

Turn on the videotape to the vignette "Praise/Positive Feedback #1, #2 and #3." Pay attention to how well the person carrying out the positive feedback statement follows the criteria stated on page 132 of your textbook. Notice the effect that each approach has on the person receiving it. Note the difference in the two approaches.

Video Instructions/Before carrying out these instructions read them over carefully.

1. Turn on the videotape to the vignette "Praise/Positive Feedback."
2. Listen to and watch the praise demonstration. There will be a slight pause, then another demonstration, this time a positive feedback phrase.
3. This procedure will be repeated for the next two vignettes.
4. After you have listened to and watched the three demonstrations, open your "Participant Exercise Booklet" to page 6-8 and answer the questions.
5. After completing the questions, turn to page 6-10 in your "exercise booklet" to find an explanation of the answers. Compare your answers to the explanations to find out how you did.

© Madelyn Burley-Allen, 1984

C34

COMMUNICATIONS ON THE JOB II
SESSION 8

VIDEO VIGNETTE - PRAISE/POSITIVE FEEDBACK #1, #2, AND #3

1. What is the major difference between the two approaches?

2. How well did Jon, June, and Stella do in carrying out the criteria for stating positive feedback?

COMMUNICATIONS ON THE JOB II

SESSION 8

1. What is the major difference between the two approaches?

   The major difference between the two approaches is that the positive feedback statement describes what a person does, whereas praise judges the person in a positive way. Receiving feedback is motivating while praise is often perceived as judgment and can make a person feel pushed to do something.

2. How well did Jon, June and Stella do in carrying out the criteria for stating positive feedback?

   All three carried out the positive feedback criteria. Each person made the statements in specific and descriptive terms. Each made eye contact, had positive facial expressions and had a positive tone of voice. In addition, each was attentive and energetic and concerned for the other person.

©Madelyn Burley-Allen, 1984

COMMUNICATIONS ON THE JOB II
SESSION 8

PRAISE/POSITIVE FEEDBACK EXERCISE

Change the statements below to provide positive feedback rather than praise. You'll have to use your imagination to fill in specific facts.

Jack, you really do good work.

Tina, you're such a nice person.

I can't believe how thoughtful you are, Mario.

Joyce, you're so talented.

COMMUNICATIONS ON THE JOB II

SESSION 8

ROLEPLAYING EXERCISE

Each person in the group is assigned to one of the roles on the next page. After reading and putting some thought into how to play your role, act out the following scenario with the people in your group.

Scenario: Roy is responsible for safety in his department. There are two other employees in his department, George and Brian. George doesn't follow safety standards as he should. George often doesn't wear his safety glasses, piles boxes higher than is safe, and sometimes has boxes jutting out into the aisle. Roy would like to get George to change his behavior. He knows that instead of judging and labeling George, he has to speak to him using the describing behavior approach. Roy speaks to George about his unsafe practices with the goal of getting him to commit to changing his behavior.

Brian, on the other hand, does a good job following safety practices. Roy wants to let Brian know that he recognizes and appreciates how Brian follows the safety rules. He realizes that he needs to use positive feedback rather than praise so that Brian will feel he's sincere and to keep Brian motivated to continue following safety practices. Roy talks to Brian about his behavior using positive feedback.

COMMUNICATIONS ON THE JOB II

SESSION 8

ROLEPLAYING EXERCISE (cont'd)

Roy:	Not a supervisor, but charged with the responsibility of safety in his department. His first reaction to George is to tell George that he's careless and to tell George what he should do. But Roy realizes that this approach won't do much to change George's behavior. That's why he decided to use the describing behavior approach and good listening skills to get George to change his safety ways. He also knows it would be easier to just tell Brian, "Good job." But he realizes this won't motivate Brian to keep up the good work or win Brian's trust for the future. He reasons that giving positive feedback about specific behaviors will show Brian that he does notice and appreciate Brian's contributions to department safety.
George:	Doesn't really care about safety. He just does whatever's easiest at the time. When Roy first approaches him about his unsafe practices, he tells Roy that neither he nor any other employee has ever been injured by anything he's done or not done. But because Roy listens to him and doesn't judge him, Roy is able to persuade him to change his practices by pointing out how he could benefit from following safe practices.
Brian:	Always tries to co-operate. However, he is a little suspicious when people praise him. He sometimes feels that because he's co-operative, people take advantage of him. When someone praises him, he figures they just want something out of him. When Roy talks to him about his safety practices, he's not sure Roy's sincere and tries to figure out what Roy really wants. But as Roy continues talking, he realizes that Roy is sincere and just wants to recognize him for following safety rules and keep him motivated in the area of safety.

COMMUNICATIONS ON THE JOB II
SESSION 8

ROLEPLAYING EXERCISE - EVALUATION QUESTIONS

1. What types of statements were used to show that Roy was using describing behavior rather than judging and labeling?

2. How did the describing behavior approach help George to commit to changing his safety behavior?

3. What types of statements were used to show that Roy was using positive feedback rather than praise?

COMMUNICATIONS ON THE JOB II
SESSION 8

ROLEPLAYING EXERCISE - EVALUATION QUESTIONS (cont'd)

4. How did positive feedback help to create a rapport with Brian?

____

____

____

____

5. What other good listening skills were demonstrated by Roy?

____

____

____

____

COMMUNICATIONS ON THE JOB II
SESSION 8

APPENDIX

REDUCING RESISTANCE IN CONFRONTATION SITUATIONS: THE I-RATIONAL VERSUS YOU-BLAMING APPROACH[13]

It is important to let others know our limits and expectations if we want our relationships to run smoothly. Just as important is being able to express our negative feelings when we are upset about something. The manner in which we handle these situations will strongly influence the results. An *I-rational approach* can decrease resistance and increase the possibilities of the receiver listening to us. We most often confront people using a *you-blaming approach* that we learned during our socialization process. This you-blaming approach often builds resistance and turns people off. As a result, the listener tunes us out and very little of our message is heard and understood.

To understand the differences between the two approaches, study the comparison summary on pg 8-3 Fac.

I-Rational Statement Guidelines

Now that you have examined the two methods and have an idea of what is meant by an I-rational approach, develop an I-rational statement you have been wanting to express to someone and haven't because you didn't know quite how to say it. Follow the guidelines described below.

An I-rational statement is a way to tell another person about a problem you are having with that person's behavior. The statement is to be expressed in a nonblaming manner.

PUTTING IT TOGETHER: Using the information that you noted above, write a concise, descriptive, I-rational statement.

"When you ____
(nonblaming description of other's behavior)

I feel ____________________________ because ____________________
(emotion)

____
(consequences)

____

You'll notice that the person using the I-rational approach has some awareness of the dynamics of the interaction with others. This is done by observing what is going on, using nonthreatening labeling words, being aware of the nonverbals and hot buttons, and by stating specifics. On the other hand, the person using the you-blaming approach, by his very actions, is not aware of the negative impact he is having on the other person.

You've probably experienced numerous situations in which the you-blaming approach was used and as a consequence felt frustrated, put-down, or angry. I can't stress enough the importance of using this I-rational approach as a method of decreasing resistance and reducing conflict.

The following examples of both statements will give you an idea of the differences in the approaches, along with a feeling about their possible impact on people.

---

[13] Adopted from the work of Dr. Thomas Gordon's book, *Parent Effectiveness Training*, Peter H. Wyden, Inc., New York, 1970.

©Madelyn Burley-Allen, 1984

TRW COMMUNICATIONS ON THE JOB II

OBJECTIVES

SESSION 9

- Identifying Codes and Symbols Used on Schematics and Blueprints
- Job-related Vocabulary Improvement

COMMUNICATIONS ON THE JOB II
SESSION 9

READING BLUEPRINTS

NOTES ON COMBINING BLUEPRINT READING AND BLUEPRINT VIDEO IN CLASS

Most of the materials that introduce Blueprint reading are written at least a 10th grade reading level. This may mean that, in a communications course that covers a span of grade 7-11th readers, the reading level of these materials may be difficult for some participants. Since Blueprints are an essential form of communication on the job, an introduction seems an important part of this course. A reading activity from "TPC Training Systems" is included to provide an in-depth reading experience on blueprints. It is written at approximately an 11th reading level.

VIDEO

For this reason, it is suggested that the "TPC" Video can be shown as an option. Participants can be encouraged to follow along with the reading. The drawings and subjects in the video correlate with the reading. Participants may want to listen and watch and then read the article. Or they may wish to underline on the written material as they listen and watch. The way in which they choose to combine the audio-visual and print materials in this session will/may depend on their preferred personal learning styles. This might be helpful to point out since previous discussion of these styles has been included in this course. The video is approximately 10 min long.

COMMUNICATIONS ON THE JOB II
SESSION 9

Facilitators can handle discussion following the video could several different ways. Suggestions include:

1. Discuss the segments as presented in the reading.

2. Have participants take turns reading the sections out loud and answer the questions as a group.

3. Read the article silently in class asking for help or clarification as needed.

4. Read the article as an assignment and return next session with completed programmed exercises and any further questions.

PLEASE NOTE THAT THE VIDEO "QUIZ" QUESTIONS AND THE QUESTIONS AT THE END OF THE READING ARE NOT THE SAME.

Participants have a suggestion sheet for using the skills presented in the course as well as a few new Interactive reading strategies. It may be helpful to review the first paragraph together after the video and before the reading activity options above.

COMMUNICATIONS ON THE JOB II
SESSION 9

PARTICIPANT PAGE: READING BLUEPRINTS

Blueprints are an important form of ______________ in the workplace.

This session will present several different activities to help increase your understanding of Blueprints.

VIDEO Blueprints

Your facilitator will help you determine the best way to use the Technical Article and the video to learn the most you can about blueprints. When you read this article try to use the reading skills that have been presented in this class. Try:

1. Using **ACTIVE READING**
2. **SETTING A PURPOSE**
3. **PREVIEWING** and
4. **ASKING QUESTIONS** to determine the main thought of the sections and paragraphs.

Several **NEW** Interactive Reading Strategies to try:

Condensing	Read a section, one or two paragraphs, without making any marks. Then go back and underline or highlight only specific words, not entire sentences. You should be able to re-read the marked words and have them make sense as full sentences.
Reflecting	Stop at intervals and re-think what you have read.
Setting Goals	To efficiently and effectively read this lengthy technical article, you are encouraged to set reading goals. Be realistic. If the whole thing looks like too much for you, spend several small sessions reading and trying the above strategies.

Evaluating yourself by using the Programmed Exercise Questions. Your facilitator will provide the answers.

OBJECTIVES

SESSION 10

- Review/Wrap-up
- Post-Assessment
- Evaluation

COMMUNICATIONS ON THE JOB II
POST - ASSESSMENT

1) Name the four Preferred Learning Style categories represented by these initials:

V

A

K

T

2) Name one of the three components of effective learning.

____

3) Mark each statement about listening True or False:

_____ People tend to pay attention to what interests them.

_____ Hearing and listening are the same.

_____ Most people have a short attention span and have trouble concentrating on the same thing for too long.

_____ The speaker is totally responsible for the success of communication.

_____ When a listener's emotional level is high, he or she will be an effective listener.

_____ Listening is a natural process.

_____ Listening is a skill.

_____ Listening requires little energy; it's "easy".

_____ Giving advice and telling the speaker what to do is not a listening skill.

_____ Speaking is a more important part of the communication process than listening.

4) List below 4 study techniques that help people learn more effectively:

____________________ ____________________

____________________ ____________________

5) Describing a persons behavior is more helpful than telling them what kind of a person you think they are. True False

6) When a person labels a behavior good or bad, right or wrong, they are using an "I-Message Approach" to communication. True False

7) Giving a person praise helps them work better. True False

8) Roleplaying is useful in training sessions. True False

9) The dictionary is considered a " power tool ". True False

10) Phonics skills are an important part of adult reading. True False

11) Name two types of dictionaries that are useful everyday.

____________________ ____________________

12) Name 2 components of a dictionary page.

____________________ ____________________

13) How many consonants are in the English alphabet? ____________________

14) The letters **w** and **y** are: (circle one answer)

consonants vowels both consonants and vowels

15) Circle the words with the short **e** sound:

she verse fret Pete

bench these press wed

16) A person's attitude is an important part of the reading process. True False

17) Name two of the four major components of the Reading Process.

____

____

18) A person should always try to maintain the same reading speed no matter what they are reading. True False

19) Reading is learned only at an early age. True False

20) A person must read every word to be a "good" reader. True False

21) If you read very fast you should still try to remember everything you read. True False

22) Name three good reading habits.

____

____

____

23) One word can have several different meanings. True False

24) A homophone is a ____________________________

25) Asking a co-worker is an acceptable way to find out what a new technical word means? True False

26) What does CNC stand for?

____

27) What does SPC stand for?

____

28) Read the following:

Producing a quality product at a fair price is the goal of any manufacturing plant. Therefore, quality control must be an important aspect of TRW's process. Product quality can be controlled in two ways.

What is the main topic of this reading:

____

____

29) Define the following TRW terms:

Dresser ____________________________________

____

Shear ____________________________________

____

Collet ____________________________________

____

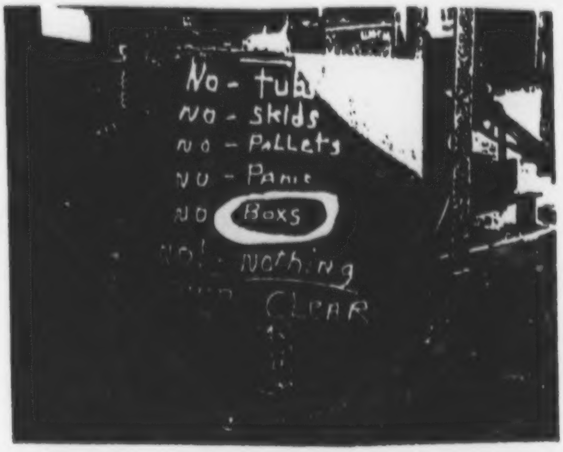
Tolerance ____________________________________

____

Process ____________________________________

____

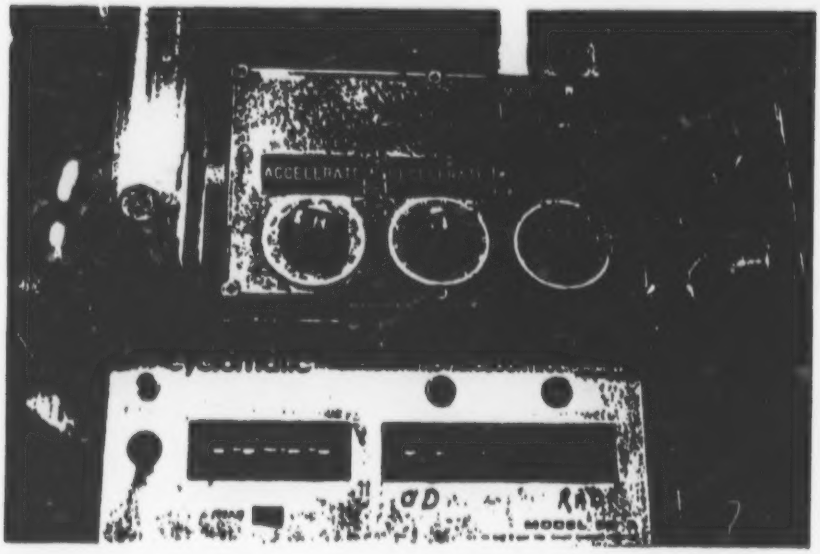
30) What is the proper spelling of the circled word on this sign.



---

31) If you wanted to make this go faster, which knob would you turn ? (circle one)

left center right



(OVER)

25) Is the verb in the sentence on the white ticket correct? Please write the correct verb on the line.

____